Using Revised Bloom's Taxonomy to Evaluate Reading Questions in EFL Textbook in Thailand

Anek Khamta

A Thesis Submitted in Partial Fulfillment of Requirements for
degree of Master of Education in English Language Teaching
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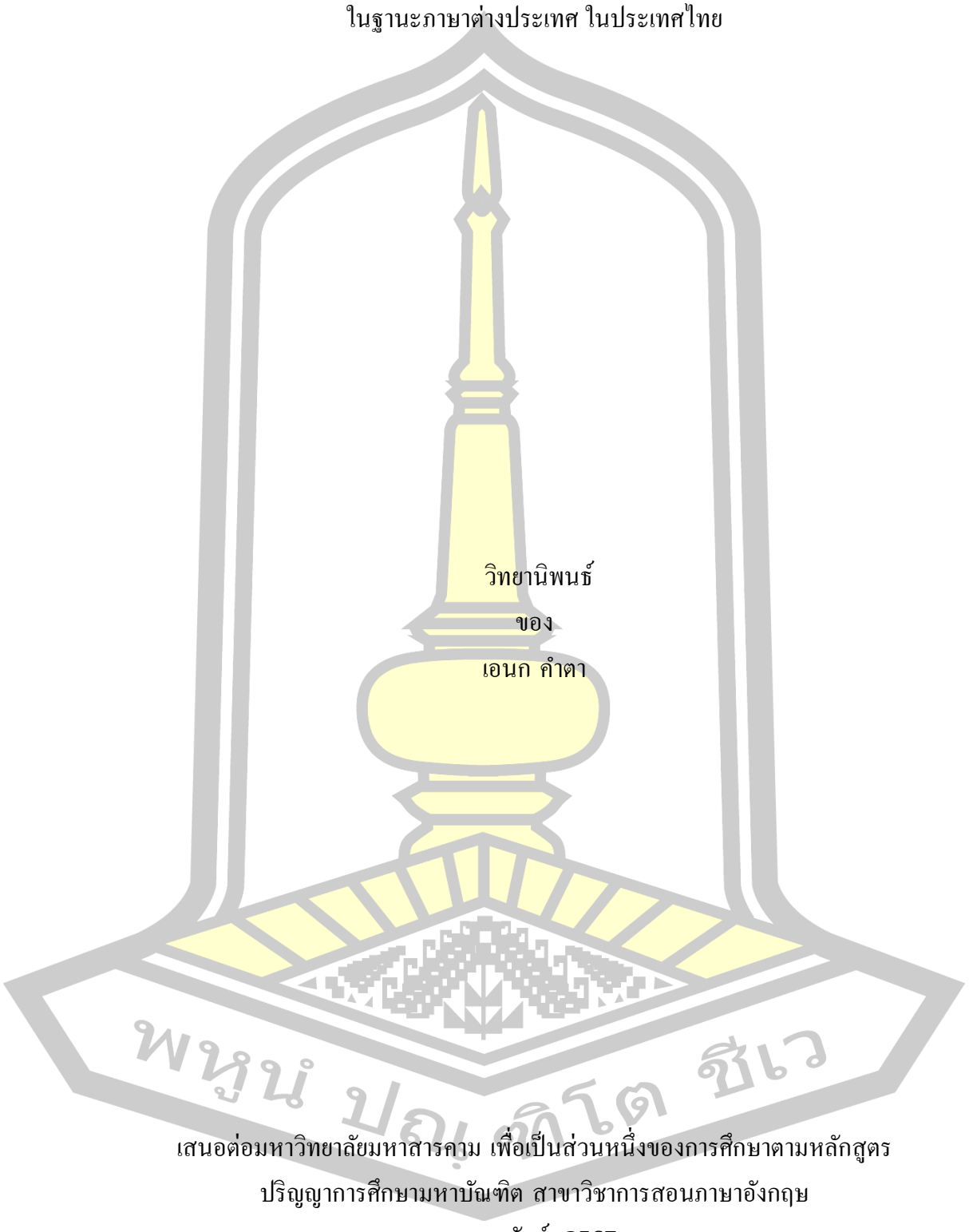
การใช้ Revised Bloom's Taxonomy เพื่อประเมินคำถามการอ่านในหนังสือเรียนภาษาอังกฤษในฐานะภาษาต่างประเทศ ในประเทศไทย



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ของ

เอนก คำตา

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ABSTRACT

This study aimed at analyzing reading questions for the development of critical thinking in *Action 1, 2,* and *3* English Language textbooks for grade seven, eight, and nine students at a Catholic school located in the northeastern part of Thailand. Specifically, this study investigated the levels of reading questions in these three English textbooks. The percentage of reading questions in each level of the Revised Bloom's Taxonomy in the three English textbooks was also explored. The study used content analysis to analyze reading questions at the end of all the reading texts in the three English textbooks on the basis of Revised Bloom's Taxonomy. All of the reading questions were collected, analyzed, classified, and calculated into percentage. The findings revealed that among 998 reading questions in ACTION 1, 2, and 3, there were greater percentage of reading questions in the lower level than reading questions in the higher level of Revised Bloom's Taxonomy; and lower percentage reading questions in Higher Order Thinking Skills (HOTS) (34.67%) than in Lower Order Thinking Skills (LOTS) (65.33%). However, reading questions in ACTION 1, 2, and 3 covered all the six levels of Revised Bloom's Taxonomy and the categories of LOTS and HOTS. While the percentage of reading questions in the level of remembering that dominated ACTION 1 kept decreasing in ACTION 2, and 3 and the percentage of reading questions in the level of understanding, applying, analyzing, evaluating, and creating kept increasing in ACTION 2, and 3. In addition, number of reading questions in the category of HOTS mostly kept increasing slightly in higher series of Action. The results of the study suggest pedagogical implications for teachers to add more reading tasks together with more reading questions in HOTS to enhance students' critical thinking. Moreover, teachers are recommended to use another book in equivalent CEFR level with reading questions in HOTS as a supplementary reading to ensure the development of students' critical thinking.

Keyword : reading questions, Revised Bloom's Taxonomy, critical thinking, lower order thinking skills (LOTS), higher order thinking skills (HOTS)

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Anek Khamta

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CHAPTER I
INTRODUCTION

1.1 Background of the study

Learners in the 21st century need critical thinking to assess information, analyze data, evaluate sources, and make informed decisions effectively on considerable amount of information that bombards them through internet technology and social media daily. Because of this reason, critical thinking skill has gained a great deal of attention at all educational levels and is an important element in any current educational system across all disciplines. Developing critical thinking skills among students becomes one of the primary educational goals and is central "to the design and implementation of the curriculum and educational policy" (Bailin & Siegel, 2002, p. 88).

Since critical thinking is not innate (inborn), educators should initiate suitable environment to train children to think critically at early ages (Aizikovitsh-Udi, 2015) throughout their educational journey (Halpern, 2002 & Kenney, 2013). Developing critical thinking skill is a long-term process that can be achieved through intensive practice and ongoing involvement in the contexts that requires complex thinking since early school years. Lai points out that "there is a place for critical thinking" in the early stages and children just like adults, can engage in complex levels of thinking (Lai, 2011, p. 23). Lai (2011) agrees that the development of critical thinking skill should take place in the early years of the individual's learning process. There are numerous ways to develop critical thinking such as teaching and learning (Setyowati et al., 2019), discussion and group discussion (Radebe & Mushayikwa, 2023), and writing and reading (Al Raqqad & Ismail, 2018; Yuliana & Tungka, 2018;Tayyeh, 2021; Ulum, 2016; Mizbani et al., 2023; Laila & Fitriyah, 2022; Mizbani et al., 2023; Irawan & Diptoadi, 2022; Hafidah, 2023).

An English textbook is regarded as one of the main instructional materials which cover all macro skills namely writing, listening, speaking, vocabulary, grammar and reading. English textbooks always provide students with a variety of reading texts followed by reading questions which are set to assess students' understanding of the given text. Heiman & Slomianko (1985) commented that students' critical thinking skills could be improved through handling and answering reading questions presented in textbooks. Because of this, reading texts serve as essential parts to train learners to practice all levels of cognitive skills and the foundation for the formal learning process.

As previously mentioned, reading questions play an important role in helping students develop their critical thinking. Furthermore, reading questions are the basis not only for identifying and clarifying readers' purpose, but also for determining the readers' selection of reading methods, comprehension degree, reading rate, and the skills utilized. Reading questions are effective tools to activate students to progress from lower-order to higher-order thinking skills and to evaluate their thinking level, which can be achieved by introducing questions of different thinking level in the textbooks. Educators generally apply different types of questions stems (prompts) based on Bloom's Taxonomy or Revised Bloom's Taxonomy to both activate students critical thinking ability and to evaluate students' levels of thinking and of their reading ability. Because textbooks play an important role in developing students' critical thinking through reading questions, teachers play an important role in developing students' critical thinking. Since textbooks as a main resource of the curriculum are numerous, different textbooks contain a variety of task types and activities that can indicate different levels of critical thinking integrated in the curriculum. Teachers are key persons to choose appropriate textbooks to ensure that critical thinking skills are properly integrated in these textbooks by evaluating reading tasks and reading questions in the textbooks that are capable of developing students' critical thinking (Aizikovitsh-Udi, 2015). Therefore, teachers need to understand critical thinking thoroughly and develop skills to instill critical thinking before introducing it to their classes.

Many scholars in the 21st century use Bloom's Taxonomy (Ulum, 2016; Yuliana & Tungka, 2018;) or Revised Bloom's Taxonomy (Tayyeh, 2021; Tangsakul et al.,

2017) to evaluate English language textbooks. For example, Ulum (2016) evaluated the extent to which Bloom's Taxonomy was incorporated into the reading questions in the English textbook called Q: Skills for Success 4 Reading and Writing. Yuliana & Tungka (2018) investigated how far three English textbooks used in senior high schools in Indonesia integrated critical thinking skills in the reading comprehension sections by using Bloom's Taxonomy. Tayyeh (2021) used Revised Bloom's Taxonomy to evaluate reading questions in the English textbook titled "English for Iraq" based on the cognitive domain of Bloom's taxonomy. Tangsakul et al. 2017) evaluated reading questions in two English language proficiency books using Revised Bloom's Taxonomy.

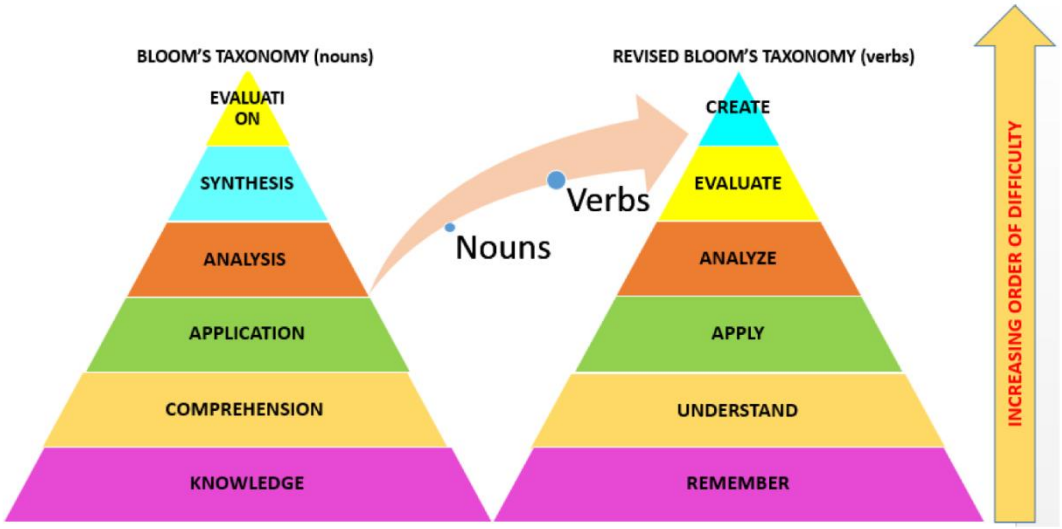
Bloom's Taxonomy was developed by a group of educational psychologists headed by Benjamin Bloom in late 1956. Bloom's Taxonomy classified educational objectives into hierarchical order that involved three overlapping domains: cognitive domain, psychomotor and affective domain. Educators often use Bloom's Taxonomy to determine curriculum, teaching and learning objectives; create and assess and learning outcomes (students' learning achievement, and to trace students' progress towards these outcomes) (Anderson & Krathwohl, 2001). Bloom's Taxonomy on cognitive domain comprises a series of six levels—Knowledge, Comprehension, Application, Analysis, Synthesis, and Evaluation. The categorization of these six levels is based on degrees of difficulty and complexity. The six levels of cognitive domain in Bloom's taxonomy framework also indicate a hierarchy of ordering thinking skills from lower-order to higher-order thinking skills, with the higher levels including all of the cognitive skills from the lower levels. The application of Bloom's Taxonomy to students' learning is that students' learning achievement can be arranged in a hierarchy from less to more complex. In other words, lower level must be achieved before the next level can be mastered. Educators generally refer to verbs, words, activities and questions used to identify students' thinking level. According to Bloom (1956), a lower-level question is a question that requires students to respond at the cognitive level of knowledge, comprehension or application. Moreover, questions belonging to lower-cognitive levels are likely to require students to simply recall the prescribed data from memory, concentrating on factual information. A higher-level question is a question that requires students to

respond at the cognitive level of analysis, synthesis or evaluation. Questions belonging to higher-cognitive levels require students engage in critical thinking, for instance problem solving, analyzing, and evaluating information.

Bloom's Taxonomy has dominated education since late 1950s. Educators in the 21st century pointed out shortcomings in the Bloom's Taxonomy and remarked that the theory needed a revision (Marzano, 2001; Anderson & Krathwohl, 2001; Forehand, 2005; Amer, 2006; Pickard, 2007). There have been attempts to revise Bloom's Taxonomy. Among various versions of Revised Bloom's Taxonomy, Lorin W. Anderson and David R. Krathwohl's version of Revised Bloom's Taxonomy developed in 2001 is most well-recognized. Lorin W. Anderson and David R. Krathwohl proposed their Revised Bloom's Taxonomy in 2001 in their book entitled 'A Taxonomy for learning, teaching and assessing: A Revision of bloom's taxonomy of educational objectives'. Lorin W. Anderson was Bloom's former Ph.D. student and David R. Krathwohl was one of the designers of original Bloom's Taxonomy in 1956. Though Revised Bloom's Taxonomy by Anderson and Krathwohl (2001) were based on Bloom's Taxonomy, there were some key differences between the two theories. While Bloom's Taxonomy embraced only one dimension of cognition namely cognitive process dimension; Revised Bloom's Taxonomy embraced two dimensions of cognition namely knowledge dimension and cognitive process dimension. Whereas Bloom's Taxonomy implied three types of knowledge namely factual knowledge, conceptual knowledge, and procedural knowledge; Revised Bloom's Taxonomy included four types of knowledge namely factual knowledge, conceptual knowledge, procedural knowledge, and metacognitive knowledge.

Revised Bloom's Taxonomy replaced Bloom's six noun form (Knowledge, Comprehension, Application, Analysis, Synthesis, and Evaluation) with verb form (Remember, Understand, Apply, Analyze, Evaluate and Create) to indicate the six aspects of cognition. (See Figure 1)

Figure 1: Comparative Table of Bloom's 1956 and Revised Bloom's 2001



Source: *https://www.researchgate.net/figure/Comparison-between-Blooms-taxonomy-and-revised-Blooms-taxonomy_fig1_350284432*

This study used Revised Bloom's Taxonomy to evaluate reading questions in the English textbooks called *Action 1*, *2*, and *3* because of the following reasons. First of all, Revised Bloom's Taxonomy provides more clarified and coherent purpose, goal, and essential questions for lesson plan (Forehand, 2005). Secondly, the 19 subcategories and two dimensions contained in Revised Bloom's Taxonomy are powerful tools for developing better lesson plans (Forehand, 2005). Finally, Revised Bloom's Taxonomy with adjusted order of the top two hierarchy is more appropriate for contemporary outcome-based education and fits well with local and governmental focus on standard educational programs (Huitt, 2009).

1.2 Problem Statements

Critical thinking provides many benefits to students. Critical thinking helps students in their future career and personal life; facilitates career success; enhances creativity and curiosity; develops research skills; elevates autonomous learning; improves good communication; increases ability to ask the right questions, problem solving skills, analytical and argumentative skills. Finally, critical thinking facilitates students' learning to think out-of-the-box. However, in Thailand, research studies on Thai

students' critical thinking indicated that Thai students lacked critical thinking skill (Kwangmuang et al., (2021). They have been used to following instructions and often find it challenging to analyze situations, make decisions, and solve problems. Critical thinking is not a new feature of Thai national education policy, but it has become more prominent recently. Current education policy requires that Thai students be able to reason, criticize, know how to solve problems, and apply these skills in real life. The National Education Act of 1999, Section 24 emphasizes that "In organizing the learning process, educational institutions and agencies concerned shall … (1) provide training in the thinking process, management, how to face various situations and the application of knowledge for obviating and solving problems; (2) organize activities for learners to draw from authentic experience; (3) drill in practical work for complete mastery; (4) enable learners to think critically and acquire the reading habit and continuous thirst for knowledge." (Office of the National Education Commission, n.d., p. 11)

A review of existing literature reflected the importance of evaluating English textbooks in order to ensure that English textbooks incorporated different levels of reading questions for the development of students' critical thinking. However, studies focusing on evaluating English textbooks with particular reference to reading questions in Thailand were scarce. Therefore, this study was set out in order to investigate levels of reading questions in three English textbooks used in middle school (lower secondary school) in Thailand. The percentage of reading questions in each level of the Revised Bloom's taxonomy (2001) was explored. The results of the study were expected to increase awareness of all involved in the learning process about the cognitive levels of the reading questions covered in English textbooks. Furthermore, the results were useful for teachers regarding the significance of evaluating English textbooks so as to achieve the curriculum objectives with particular reference to the development of students' critical thinking.

1.3 Purposes of the study

This study aimed to investigate levels of reading questions in three English textbooks called *Action 1*, *Action 2* and *Action 3*. The percentage of reading questions in each level of the Revised Bloom's taxonomy in the three English textbooks was explored.

In the light of what were discussed earlier, this current study attempted to answer the following two research questions:

(1) What are the extents of reading questions regarding critical thinking in reading texts in Action 1, 2, and 3 based on revised Bloom's Taxonomy?

(2) What is the ratio of reading questions for LOTS and HOTS in reading texts in Action 1, 2, and 3 based on revised Bloom's taxonomy?

1.4 Scope of the study

Using a content analysis method, this study aimed to investigate levels of reading questions incorporated in three English textbooks called *Action 1, Action 2 and Action 3.* This research focused on all reading texts and all reading questions in each module. In addition, percentage of reading questions in each level of the Revised Bloom's Taxonomy (2001) in these English textbooks was examined. These three textbooks were selected for evaluation because they have been widely used in most Catholic schools in Thailand. In addition, EFL textbooks needed to be evaluated to ensure that they aligned with one of the learning objectives of the English curriculum which emphasized students' development of critical thinking. To collect data, all reading questions of reading texts in all modules of these three textbooks were counted, analyzed and categorized using a reading question checklist which the researcher developed on the basis Revised Bloom's Taxonomy (2001).

1.5 Significance of the study

With the results regarding levels of reading questions in the English textbooks and percentage of reading questions in each level of the Revised Bloom's taxonomy, stakeholders who are involved in the learning process in Catholic schools in Thailand will be aware of the cognitive levels of the reading questions covered in these textbooks. Furthermore, EFL teachers will be aware of the importance of evaluating English textbooks to ensure that they contain different levels of reading questions which include lower order thinking (LOT)and higher order thinking (HOT)questions.

1.6 Definitions of key terms

Bloom's taxonomy refers to a classification of curriculum and educational goals (objectives) developed by a group of educational psychologists headed by Benjamin

Bloom in 1956.There are six levels in noun form in hierarchical order in the Bloom's Taxonomy, namely knowledge, comprehension, application, analysis, synthesis, and evaluation.

Revised Bloom's taxonomy refers to a classification of curriculum and educational goals (objectives) developed by Lorin W. Anderson and David R. Krathwohl in 2001 based on the original Bloom' Taxonomy. This revised version of Bloom's Taxonomy is conceptually different from the original Bloom's Taxonomy. There are six levels in verb form in hierarchical order in the Revised Bloom's Taxonomy namely remember, understand, apply, analyze, evaluate, and create.

Lower Order Thinking Skills (LOTS) are the basic/foundational cognitive processes and practices that need to move to Higher Order Thinking Skills (HOTS). LOTS include remember, understand, and analyze in Revised Bloom's Taxonomy.

Higher Order Thinking Skills (HOTS) are the cognitive processes that require thinking at a more complex, higher level and have more generalized benefits. HOTS include analytical, evaluative and creative thinking skills in Revised Bloom's Taxonomy (Setiawati, 2019).

EFL textbook refers to three English textbooks titled *Action 1, Action 2* and *Action 3* which have been used in most Catholic schools in Thailand.

Reading questions refers to a list of questions put after each reading passage. Each of the reading questions has a particular objective such as evaluating readers' understanding of the vocabularies (decoding symbols) in the written texts; enabling readers to get knowledge, information, and meaning from the written texts (comprehension); stimulating inference, logical thinking, evaluation, and creativity. Each of these questions reflects a certain cognitive level and matches one of six levels of *Revised Bloom's Taxonomy* (including the original Bloom's Taxonomy). The questions that match the first three levels aim at developing lower-order thinking skills (LOTS) and the questions that match the top three levels aim at developing higher-order thinking skill (HOTS).

Lower order thinking questions are the questions which ask students to use basic/foundational cognitive process to remember, understand, and apply the material previously read or learnt. In other words, they are the questions that match the first three levels of revised Bloom's Taxonomy (including original Bloom's Taxonomy). These questions aim at developing lower-order thinking skills (LOTS)

Higher order thinking questions are the questions which ask students to use more complex and higher cognitive process to analyze or evaluate the materials/ information/ knowledge that have been previously gained or to create/innovate a new item out of the materials/ information/ knowledge that has been previously gained. In other words, they are the questions that match the top three levels of Revised Bloom's Taxonomy including analyze, evaluate and create. These questions aim at developing higher-order thinking skills (HOTS)

1.7 Structure of this thesis

Chapter I presents the background of the study, purposes of the study, scope of the study, significance of the study and definitions of key terms.

Chapter II presents a review of relevant literature on types of EFL textbook, textbook evaluation, critical thinking in EFL textbooks, types of reading questions based on Revised Bloom's taxonomy (2001), and previous studies.

Chapter III outlines the research methods of the current study, including the research design and paradigm, data sources, data collection procedures and data analysis.

Chapter IV analyzes pre-reading and post reading questions in each reading passages in each of the ten modules of ACTION 1, 2, and 3 and presents the results of the analysis the levels of reading questions in ACTION 1, 2 and 3 and the distribution of LOTS and HOTS in ACTION 1, 2, and 3 according to Revised Bloom's taxonomy.

Chapter V discusses the results of the analysis of the pre-reading and post reading questions in reading passages in ACTION 1, 2 and 3; the levels of reading questions in ACTION 1, 2 and 3; and the distribution of LOTS and HOTS in ACTION 1, 2, and 3 according to Revised Bloom's taxonomy.

1.8 Chapter summary

This chapter presents the rationale of doing research on the topic ‘Using Revised Bloom’s Taxonomy to Evaluate Reading Questions in EFL Textbooks in Thailand’. The purposes of the study, scope of the study, significance of the study, definition of key terms, and structure of the proposal are presented so as to articulate the direction and aims of the research.

CHAPTER II
LITERATURE REVIEW

This chapter reviews relevant literature on EFL textbooks with regards to the roles of textbooks in the EFL/ESL classroom, textbook evaluation, the importance of critical thinking, implementation of critical thinking, reading for critical thinking in EFL textbooks, definitions of reading, importance of reading, purposes of reading, reading comprehension based on Revised Bloom's Taxonomy, comparison of original Bloom's Taxonomy and Revised Bloom's Taxonomy, application of Revised Bloom's Taxonomy to teaching and learning, previous studies on evaluating reading questions in EFL textbook. This chapter ends with chapter summary.

2.1 School Textbooks in the EFL/ESL Classroom

Textbooks are a vital component in the study of foreign language including English as Foreign Language (EFL) in schools. Textbooks provide most of the language input, language practice, contents of the lessons, and language skills for a certain English course for both learners and teachers. Textbooks determine learning objectives, learning strategies, learning contents, class activities and instruction materials and methodology. Textbooks eventually impose potential congruence between students' language acquisition and teachers' instructional paradigm. Sheldon (1988) remarked that textbooks were the heart of any English Language Teaching (ELT) program for both the students and teachers. For students, textbooks served as a concrete measure their progress and success in English mastery, effective sources of self-directed learning, an effective source for presentation materials, sources of ideas and activities, a reference source, and a syllabus preview and review of learning contents and objectives. For teachers, textbooks provided a useful guide and support for lesson plan preparation, instruction, learning evaluation, selection of instruction materials. Cunningsworth (1995) and Hutchinson & Torres (1994) have suggested that textbooks play vital roles in language teaching innovation for teachers by introducing changes and demonstrating new and/or untried teaching methodologies that have been recently developed by experts.

Though textbooks provide many benefits to ELT curriculum, they have limitations that teachers have to acknowledge. Textbooks are usually rigid and present the authors' individual interests, pedagogical, psychological, and linguistic preferences and biases. Alptekin (1993) and Gray (2000) pointed out that some textbooks contained contents, language models, and dialogues that were not natural suitable for communication or cooperative language teaching in the real-world. Bardovi-Harlig et al. (1991) reminded English teachers that textbooks were not tailored made for each particular student, teachers needed skills to use textbooks to serve students' sensitive needs, adapted and focus on their English instruction within the limit of their time, money, and environment. This fact implies that teachers need recommendations on how to use textbook appropriately, however, only some textbooks publishers have organized training workshop for teachers of how to apply new methodologies to build a more creative methodologies to meet students' learning needs. Many ELT textbooks nowadays are the "…tainted end-product of an author's or a publisher's desire for quick profit" (Sheldon, 1988, p. 239). When these publishers produce and market ELT textbooks without sufficient backup research, their textbooks contain serious theoretical problems, design and practical flaws.

The information above indicates that among millions of copies of commercial English textbook as foreign language (EFL) available in the market, there are no perfect EFL textbooks suitable for all EFL courses (Hutchinson & Torres, 1994). Moreover, there is no consensus on the point of completely perfect textbooks. Textbooks with different concentration have both advantages and disadvantages to a certain degree. Teachers have to make choice of textbooks with caution to meet students' particular needs in a specific teaching/learning environment. Therefore, the availability and selection of textbooks are crucially important for both students and teachers in all levels of English courses/programs. May scholars have given an advice in their books that good English textbooks should accommodate students' needs; equip students with how to use English language efficiently; have clear learning supports, clear aims/layout/methodology/organization; include macro-language skills (listening, speaking, reading, and writing), micro-language skills (grammar and vocabularies and others), and language forms (Cunningsworth, 1995); Cunningsworth & Kuse, 1991);

Harmer, 2001); and Ur, 1996). Cunningsworth (1995) and Ellis (1997) advised that textbooks needed continual evaluation to make sure that they were suitable for learning process, met students' needs, and accommodated updated materials for students to learning objectives. Widyantoro (2017) commented that Good English textbooks needed to accommodate/implement critical thinking elements.

2.2 The Concept and Importance of Critical Thinking

Western education has indicated the need of critical thinking for a long time since the age of Enlightenment (Gordon & Lawton, 2019). However, non-Western countries have adopted the critical thinking as an essential element in their education system recently. There are a number of research studies on critical thinking in several countries in Asia such as Indonesia, Morocco, Israel, Singapore, Japan, Hongkong and Taiwan.

Cottrell (2011) argued that critical thinking was a cognitive activity that involved mental processes such as attention, categorization, selection, and judgment. Mulnix (2012) and Elder & Paul (2012) identified critical thinking with the higher-order thinking in Bloom's taxonomy. Anyway, Rudd (2007) and Ennis (1996) disagreed with this identification. They indicated that critical thinking was broader than higher-order thinking because critical thinking involved some other elements that were not included in higher-order thinking. They were problem solving, creative thinking, and decision making (Tuzlukova, Busaidi, & Burns, 2017), meta-cognition (knowing about knowing), logical evaluation of information sources, strategies for selecting appropriate solution in decision making (Yang & Gamble, 2013).

The Partnership for 21st Century Skills (P21) maintained that today's schools could not avoid the need to respond to the influences of industrial and information of the 21st Century. They needed to blend learning/ teaching contents with real-world relevance by focusing on cognitive skills and affective and aesthetic domains. To help schools achieve such challenging goals, the Partnership has created a framework for 21st Century learning. This framework was developed based on a national poll in 2007. The P21 poll focused on teaching 21st Century skills needed for the country's future economic success. Among the long list of responses in the P21 reports, nearly

all responders voted for the skills of critical thinking and problem-solving, computer and technology skills, and communication and self-direction skills. This finding has influenced educational agendas and policies in the U.S. and the world (The Partnership for 21st Century Skills, 2009).

Cottrell (2011) described the benefits of critical thinking as follows: improving attention and observation, reading with more focus, identifying the key points in a text, improving responses to key points of a message, getting point to get knowledge easily, and facilitating the skill of analysis. Judge, Jones & Mccreery (2009) added that thinking critically, analytical, and objectively was essential for successful learning. Ilyas (2016) gave additional explanation that critical thinking referred to cognitive and rational thinking. Objective thinking referred to thinking without bias, independent from personal beliefs, feeling and fear.

2.3 Implementation of Critical Thinking

Ennis (1996) & Norris (1992) introduced four approaches to teach critical thinking, the general approach, the infusion approach, immersion approach, and the mixed approach.

1. The general approach posits that CT is a skill that can be taught and learnt and advocated by using non-subject. This approach is supported by McGregor (2007) and Solon (2001).
2. The infusion approach advocates teaching CT by incorporating explicit general critical thinking principles in subjects.
3. The immersion approach advocates teaching CT without incorporating explicit critical thinking principles in subjects.
4. The mixed approach is a combination of the general approach with the infusion and/or immersion approach. This method was developed by Angeli & Valanides (2009) in their experiment.

The followings are examples of how to implement CT in English reading course. Yang & Gamble (2013) confirmed that the integration of CT in reading course activity could successfully improve reading and listening comprehension. Their first experiment was to implement CT to the reading course by supporting learners in the

process of information literacy and critical reading, by providing a collaborative environment, and by exposing learners to various additional, authentic, and relevant readings and related materials. Yang & Gameble's second experiment dealt with the implementation of the CT-integrated EFL instruction. This method included activities and assignment. They contended that the second method could result in both higher order of thinking and knowledge retention leading to improve academic and target language performance (Yang & Gamble, 2013)

Beaumont (2010) and Numrich (2002) introduced the implementation of CT into the English course by integrating sequences of tasks related to adapted English materials. The tasks concerned identifying assumptions, understanding, and organizing, interpreting, inquiring further, analyzing, evaluating, and making a decision. They confirmed that their implementation resulted in the development of Revised Bloom's (1956) dimensional taxonomy, the cognitive dimension that contained six ways of thinking- remember, understand, apply, analyze, evaluate, and create.

2.4 Critical Thinking in EFL Textbooks

There are a number of the studies that examine the effectiveness of implementing CT in English textbooks.

A study by Assaly & Igbaria (2014) examined CT on an English textbook used in Israel. This study investigated CT by analyzing the listening and reading activities with the ground theory of Bloom's taxonomy of which hierarchical orders were knowledge, comprehension, application, analysis, synthesis, and evaluation. This study revealed findings that activities on comprehension in the textbooks represented more lower order thinking skill than higher order thinking skill. Morocco, Es-Salhi & Elfatihi (2019) evaluated two Morrocan English textbooks and found that the textbooks represented knowledge, application, and comprehension, which were identified as the lower order thinking. A study by Birjandi & Alizadeh (2013) investigated three English textbooks used in Iran. This applied Bloom's taxonomy added by categories of deduction, induction, building a community of thinkers, balanced-thinking, multiple perspective taking, and creative thinking. However, this study did not elaborate on the notions and examples of elements added to Bloom's taxonomy. These findings finally revealed that critical thinking aspects were found in

comprehension, knowledge, application, and community thinkers. In addition, two studies in Indonesia were conducted to investigate critical thinking in EFL textbooks. Ilyas (2015) studied nine English textbooks for the context of English as a Foreign Language (EFL) and Solihati & Hikmat (2018) studied critical thinking in Indonesian language textbooks. Ilyas finally revealed that English textbooks contained few elements of critical thinking that was only 15% of critical thinking questions. Similarly, Solihati & Hikmat (2018) also found that less than 17% of tasks had the potential to promote students' critical thinking skills. Both studies did not use Bloom's taxonomy, instead, they applied Ilyas' critical thinking framework. This framework was the result of synthesizing 21 critical thinking theories that were two critical thinking taxonomies (Freeman's and Bloom's), six empirical studies on critical thinking in English language teaching, nine critical thinking programs, and four critical thinking tests. The studies revealed that critical thinking was found in the language textbook, therefore, it was assumed that critical thinking could be taught through literacy.

To conclude, critical thinking is a cognitive activity that is a crucial need for people in the 21st century. Learners in the 21st century are bombarded with thousands of information daily. Since some information is true and some others is fake, their ability to categorize, analyze, select, and make judgment on the information is important. This is the reason why the development of critical thinking needs to be integrated in all aspects of education. The implementation of critical thinking in the course of ESL/EFL can broaden its function to the development of both English language proficiency and critical thinking ability.

2.5 Reading and Critical Thinking

Reading, a way of understanding written messages is one of the most essentials skills as well as speaking, listening, and writing in English language proficiency. Reading is considered one of the most effective strategies for developing critical thinking (Liaw, 2007).

2.6 Concept of Reading

Nuttall (1996, p.2) argued that reading was "a result of interaction between the writer and the reader through written text in which the reader tries to get the message or the

intended meaning" that the writer wants to convey in the text. So as to get the messages, the reader needed to understand the direct (apparent) meaning of the written text and get the hidden meaning of the written text that the writer intended to convey through interpretation.

Nunan (2003) explained that reading was a process of meaning construction in which a reader combined the information from the text with his/her background. In this process, the reader integrated his/her knowledge and experience about the uses of spoken and written language with the information in the text he/she was reading. Mikulecky (2008) gave additional remarks that reading was a dual thinking process, conscious and unconscious. In a reading, the reader had to approach the written text by using prior knowledge and experience about the uses of written and spoken language. Honig (2001) gave a different explanation that a reader needed phonic awareness, the ability to decode unfamiliar words, word attack skills, and understanding of language structure for successful reading.

Burns, Roe, & Ross (1999) argued that reading skill was a must for every English language learner. It was an important tool for further learning. This meant the leaner could not advance his/her learning to the higher stage if he/she lacked reading skill. It was a complex behavior to be learnt by every learner because "a person learns to read and reads to learn" (Burns, Roe, & Ross, 1999, p.11). Reading was a complex activity because it involved visual, thinking (including imaginative), psychometric, and metacognitive abilities. A reader needed to combine these components in the reading process so as to understand the meaning that the author tended to convey in the written text (Farida, 2016).

Pang et al. (2003) gave additional note that reading was the attempt to understand written texts that involved word recognition and comprehension processes. They defined word recognition as the process in which the reader perceived the written symbols in the text in consistent with his/ her own spoken language. And they defined comprehension as the process in which a reader made sense of words, sentences, and connected text. A reader needed to make use of background knowledge, vocabulary, grammatical knowledge, experience, and other strategies to enable them to understand the text he/she reads thoroughly.

In conclusion, reading is an essential skill for students' academic success. Reading fosters a comprehension of the text read. A comprehension is the result of a process in which the reader combines prior knowledge, experience about the use of language, and other strategies to building a meaning to the text he/she has read.

2.7. The Importance of Reading Skill

Reading is regarded as both receptive and active skill. Reading activity is a receptive process because the readers receive messages and information from the reading texts while reading. Reading activity is also an active process since it requires the reader to have an active participation. The readers' eyes and mind have to keep alert of the reading activity so that the reader can comprehend the text (Linse, 2005). Linse (2005, p.69) has given further comment that "reading is a set of skills that involves making sense and deriving the meaning from the printed word." During the reading activity, the reader has to be active in capturing the meaning of the words, phrases, or sentences in the text so as to get the understanding of the text. Zadina (2013) gave another comment on this issue. He argued that since a reading process was a two-way communication between the author and the reader of the reading text, the reading process was active on both parts. The writer was active in the attempt to convey meaning by selecting appropriate words, sentences, and context. The reader was active in the attempt to derive and creating meaning out of the reading texts. He wrote "[reading] is an active process that depends on both author's ability to convey meaning using words and your ability to create meaning from them"

Harmer (2001) believed the reading an active skill because during a reading, the reader's eyes and brain kept active. Moreover, the reader's brain kept thinking and reflecting on contents of the text that has been read. He wrote "[reading] is an exercise dominated by the eyes and brain. The eyes receive messages and the brain then has to work out the significance of these messages" (Harmer, 2001, p. 153). Grabe & Stoller (2019) gave a definition of reading as the ability to draw meaning from the printed pages and interpret this information appropriately. This implies that reading is active because it needs the functioning of the eyes and the brain.

In conclusion, reading is an active skill because it is a process in which the reader's eyes and brain function together so as to grasp the meaning and understand reading

text. It is an essential skill for students. Reading is food for brain. The more students read the better thinkers they become. Their brains are sharpened by reading. Reading provides numerous benefits for students such as information, knowledge, inspiration, life-formation, and entertainment. Through reading, students develop constructive, analytical, and critical thinking. Reading is a precondition for cognitive and intellectual development. Without attentive reading students can not get comprehension of the texts (books) which are the essential sources of cognitive and intellectual development. Consequently, teachers have to help their students to develop reading habit.

2.8 Purposes of Reading

Grabe (2008) in the book called 'Reading a Second Language: Moving from Theory to Practice' explained that reading could serve six different purposes. They were 1) reading to search for simple information, 2) reading for quick understanding, 3) reading for general comprehension,4) reading to learn, 5) reading to integrate information, 6) reading to evaluate, critique and use information.

First, reading is used for searching simple information: The readers read because they wish to look for or find particular information in brief or in detail from a certain text. Second, reading is used for quick understanding. It is technically called a skimming. It refers to the acts of quick reading so as to find out desired and useful information in the text for various purposes such as decision making, writing reports, or curiosity. Third, reading is used for grasping general comprehension. It refers to the reading for the purpose of capturing main ideas represented in the written text and constructing meaning from the text. Fourth, reading is used to learn. It refers to reading a written text so as to grasp the language used in form of words, phrases, sentences, contexts, and organizations within the texts. The information derived from the texts and the understanding of the apparent and hidden meaning of the texts will be connected to create body of knowledge in the readers' knowledge bank. Fifth, reading helps the reader integrate information. It refers to reading to retrieve information from different written texts. The reader will process the information derived by combining and synthesizing them to create one's own self-organizing information format. Sixth, reading is used to evaluate, critique, and use information: It refers to the act of

reading of a certain written text with analytical and critical mindset so as to make judgment on the information derived from the text. It is the reading type that requires readers to consider which part of the text is the most or least important.

To conclude, reading is one of the most important skills that needs to be acquired by learning and practice. The purpose of reading is to understand, create meaning, categorize, analyze, create meaning, critique and make judgment on the written messages (information) that the authors intend to convey. An efficient reader needs ability to derive both explicit and implicit (hidden) meaning in the text he/she has read. An efficient ESL/EFL course should teach students to acquire this important skill.

2.9 Reading Textbooks, Reading Texts, and Reading Questions in EFL Course

This study focused on the reading texts in school textbooks titled *Action 1, 2,* and *3*. There are several types of reading textbooks for EFL, namely intensive reading textbooks, informational textbooks, extensive reading textbooks, reading skills textbooks, and integrated skills and series textbooks. Each type of reading textbooks has unique features and contains varied reading texts. Each reading text is always preceded or followed by reading questions to evaluate readers' comprehension or/ and critical thinking.

2.9.1 Intensive Reading Textbooks

This type of English textbook focuses on the development of the ability of reading comprehension through reading texts in the textbook and doing related exercises. The authors usually compose and arrange these reading texts in accordance to the readers' level of L2/F2 proficiency. Exercises, mostly in forms of reading questions at the end of reading passages are based on the reading text with different concentration (Flurkey, Goodman & Murphy, 2021).

2.9.2 Informational Textbooks

This type of English textbook provides readers with non-fiction writings with aims to educate or inform readers about a particular or varied topic. The topics presented in this kind of textbooks are excerpts from original articles in magazines, science and technology books, social and history books, autobiographies, and instruction manuals.

Informational textbooks take various forms such as variety textbooks, content-based textbook, story/narrative textbook, authentic textbook, and modified textbook (Goodman & Freeman, 1993).

2.9.3 Extensive Reading Textbooks

This type of English textbooks encourages students to expand their reading beyond the classroom textbooks by providing large quantity of excerpts from original texts outside the reading text for students to read.

2.9.4 Reading Skills Textbooks

These textbooks make use of various reading methods, such as scanning, skimming, inferencing, finding main ideas of the paragraph, and summarizing to develop reading ability. Each chapter or section of the textbook presents short reading texts for students to practice a certain reading skill. Exercise at the end of the text is to test the learner's ability to apply the reading strategy to understand the contents or vocabularies in the reading text.

2.9.5 Integrated Skill and Series Textbooks

This type of textbooks aims to develop all essential skills of language proficiency—listening, speaking, reading, and writing. This kind of textbooks are appropriate for L2/FL leaners at the beginning and intermediate level. Reading texts and exercise to test readers' reading comprehension are integrated in each chapter or section of the text with limitation so as to keep balance of the contents. Series books are set of integrated skill textbooks of which contents progress in degrees of difficulty. Scholars in this field suggest that at the beginning of each new level, a review of previous taught skills should be presented briefly so as to help learners develop long term retention of what they have learnt previously (Salataci & Akyel, 2002; Auerbach & Paxton, 1997; Moran, 1991).

2.10 Reading for Critical Thinking

Enormous information available in reading texts in either textbooks or any printed materials are all written by human authors with certain purposes, attitudes, mindset, and social-cultural background. Sometimes skillful writers use complicate writing technique and logic so as to mislead readers. Therefore, not all information in

reading texts is true, trustworthy, and accurate. This fact requires readers to read selectively, select bits and pieces of information that are interesting and useful, and separate accurate information from inaccurate information, factual report from opinions. Readers need critical reading and critical thinking to do so. Academic literature has defined critical reading and critical thinking in a variety of ways. Shannon (as cited in Jongsma, 1991, p.519) viewed critical thinking "as a means for understanding one's history and culture and their connection to social structure…and for fostering an activism toward equal participation for all decisions that affect and control our lives". Flynn (1989, p.664) explained that critical reading involved "an interactive process using several levels of thought simultaneously".

Reading comprehension skill is essential in English as foreign language learning. Through reading, students can improve vocabulary, fluency, speaking and writing skills, and ultimately help them master the target language (Hung & Ngan, 2015; Azizifar, Roshani, Gowhary, & Jamalinesari, 2015; Ghanbaria & Marzban, 2014). Reading comprehension can help learners improve their English language proficiency and improve their knowledge from the information that they get from the reading text (Habók & Magyar, 2018). Therefore, students who have a high reading comprehension strategy will possess a higher-level language proficiency. Furthermore, reading comprehension is related to critical thinking (Aloqaili, 2012). It means that the ones who have good reading comprehension skills will have good critical thinking skills (Akkaya, 2012). Besides, it also works on the other way around. Critical thinking is also believed to have a significant role in reading comprehension (Heidari, 2020; Kamgara & Jadidi, 2016). Critical thinking is a metacognitive process through a reflective assessment to generate logical conclusions in determining solutions to a problem (Dwyer, Hogan, & Stewart, 2014; Dekker, 2020). Thus, teachers need to improve students' critical reading because it will help them get the root of problems and find a reasonable solution (ŽivkoviĿ, 2016). Moreover, it is essential to develop critical thinking because critical thinking is the basis of innovation (Wechsler, et al., 2018). From previous explanations, it can be understood that reading comprehension and critical thinking skills are essential for students who learn English as a foreign language. However, some of the problems usually experienced by students in EFL reading classes are the lack of vocabulary,

linguistic complexity including lexical and syntactic knowledge, and prior-knowledge (Kasim & Raisha, 2017; Küçükoğlu, 2013; Satriani, 2018).

2.11 Evaluation of Reading Questions in Reading Texts

Reading texts in school textbooks are always followed by reading questions. According to Bloom (1956) and Anderson & Kathwohl (2001), questions play important roles in structuring students' cognitive process. Since both critical reading and critical thinking involve reasoning, withholding judgement until confirming or disconfirming evidences are gathered; questioning, and inferring. There are varied types of reading questions that precede or follow reading texts and each question has different purpose and requires different level of cognitive function. This means an evaluation of reading questions is an evaluation of level of cognitive process that students use to answer reading questions. In other words, the evaluation of reading questions is an effective tool to identify students' level of critical thinking. Nowadays, there are two sets of taxonomy commonly used to evaluate reading questions. They are Bloom's Taxonomy and Revised Bloom's Taxonomy.

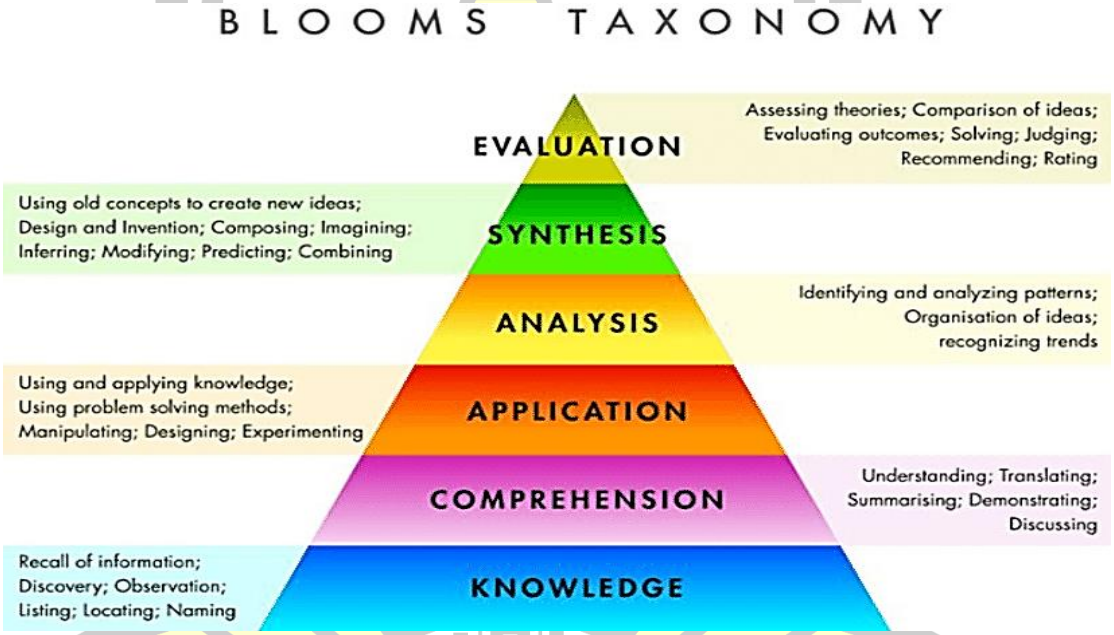
2.12 Bloom's Taxonomy

Bloom's Taxonomy or Original Bloom's Taxonomy is one of the most influential educational models nowadays. Educators in various sectors such as schools for basic education, technical and vocational schools, special schools, and universities employ Bloom's Taxonomy for educational practice, students' performance evaluation and research.

Bloom's Taxonomy was developed by a team of American educational psychologist headed by Benjamin Bloom. This team consisted of Benjamin Bloom, Max Englehart, Edward Fust, Water Hill, and David Krathwohl. Their discovery was first published in the book 'Taxonomy of Educational Objectives' wrote by Bloom and his colleagues in 1956. Bloom Taxonomy was developed on the thesis that learning is a cognitive process because learning is a tool for developing thinking skill. Thinking skill proceeds in sequences of stages or level, from the basic to the complex level. Bloom Taxonomy is a classification of learning goals into categories. This classification is to provide teachers with a framework to discuss curricular and

evaluate learning outcome with precision. The first version of Bloom Taxonomy or sometimes called original Bloom's Taxonomy consists of six levels of learning/thinking. Each level consists of a noun representing learning action. They are 1) Knowledge, 2) Comprehension, 3) Application, 4) Analysis, 5) Synthesis, and 6) Evaluation. In addition, the six levels of Bloom's Taxonomy are classified into two classes (categories) of thinking skills. They are Lower-Order Thinking Skills (LOTS) which includes memorization, recognition, recall, understanding, and application and Higher-Order Thinking Skills (HOTS) which includes analysis, synthesis, and evaluation.

Figure 2: Six Levels of Original Bloom's Taxonomy



Source: https://www.merritt.edu/slo/for-faculty/blooms-taxonomy/

2.13 Critiques of Bloom's Taxonomy

Though Bloom's Taxonomy or Original Bloom's Taxonomy has been globally recognized as the framework used to determine and classify the objectives of learning/teaching and curriculum since inception in 1956, researches and studies in the 21st century indicated the Original Bloom's Taxonomy needed revisions. Important critiques of Original Bloom's Taxonomy are as follows:

Bloom's Taxonomy does not fit in the Education of the 21st Century. The 21st century world is different from late 19th century world. Bloom's Taxonomy that was designed

to respond to education of 1950s was not appropriate for education in the 21st century that focused on learner-centeredness, self-regulated learning, autonomous learning, metacognitive skills, learning outcome, responsiveness to local and central government education scheme (Amer, 2006).

Bloom's Taxonomy contains a rigid, cumulative and hierarchical structure. Original Bloom's Taxonomy takes a form cumulative structure that progresses hierarchically according to the degree of difficulty. Higher step of cognitive process is based on the performance of lower cognitive process and levels of cognitive process proceed from low-to-high in a hierarchical order. Research in clinical psychology and neurology indicate that it is not true in all cases (Krathwohl, 2002). Bloom's Taxonomy does not respond to recent developments in education and constructivism, and recent theories of education. Constructivism maintains that students create knowledge during their meaningful and active learning. Constructing process requires learners to access, evaluate, and choose information; and compare information at hand with the old ones. In this framework, both junior and senior school children can use multiple types of cognitive process. Both junior and senior school children use synthesis and evaluation cognitive process, but in different degree of complexity. Students are expected to make progress in creating knowledge in this manner in early ages and progress on yearly basis. According to the original Bloom's Taxonomy, students can use evaluation cognitive process after they have acquired five previous cognitive processes. This assertion is not true in all cases (Pickard, 2007).

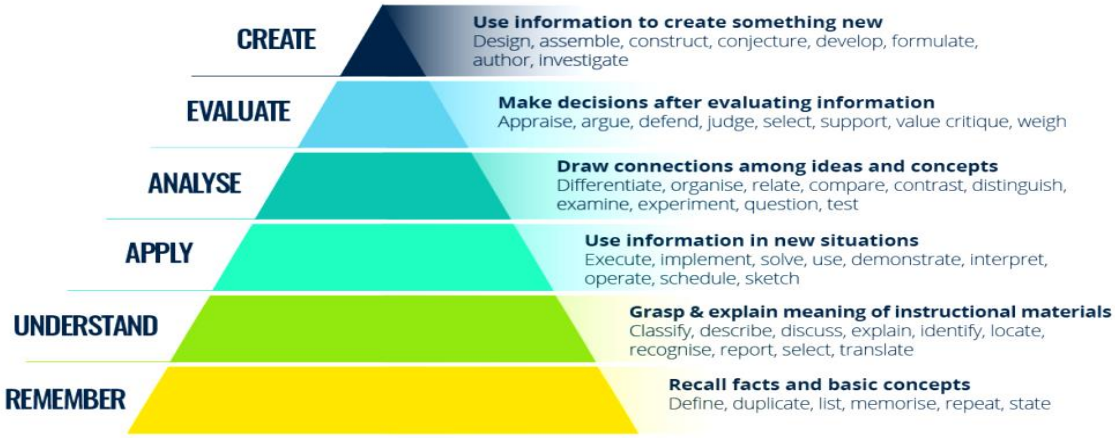
Bloom's Taxonomy is unidimensional in nature. Knowledge step is expected to cover both noun form and verb form. While noun form is used to describe target dimension or knowledge, verb form is used to describe cognitive process. When Original Bloom's Taxonomy use only noun form, Original Bloom's Taxonomy is unidimensional because it could cover only cognitive process dimension (Krathwohl, 2002).

2.14 Revised Bloom's Taxonomy

Revised Bloom's Taxonomy was developed by a group of educational researchers led by David Krathwohl (a member of researchers who developed Original Bloom's Taxonomy) and Lorin Anderson (one of Bloom's Ph.D. students). The revised

Bloom's Taxonomy consists of six verbs explaining levels of learning activities ranging from basic level to advanced level. They are 1) Remember, 2) Understand, 3) Apply, 4) Analyze, 5) Evaluate, and 6) Create. Their discovery was published in the book entitled 'A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives' in 2001.

Figure 3: Six Levels of Revised Bloom's Taxonomy



Source: *https://www.growthengineering.co.uk/what-can-blooms-taxonomy-tell-us-about-online-learning/*

2.15 Definition of the Six Levels of Revised Bloom's Taxonomy

Anderson & Krathwohl (2001) have defined each of the six levels of Revised Bloom's Taxonomy as follows:

Remember refers to recognizing or recalling knowledge from long-term memory to list, or to recite the information or the fact that has been previously learnt. Remember is a cognitive process when memory is used to produce or retrieve definitions, facts, or lists, or to recite previously learned information.

Understand refers to constructing meaning from either written or graphic or audio messages or activities by means of interpreting, exemplifying, classifying, summarizing, inferring, comparing, or explaining.

Apply refers to carrying out or using a procedure that has been previously learned to execute, or implement. Applying relates to or refers to situations where learned

material is used through products like models, presentations, interviews or simulations.

Analyze refers to breaking materials or concepts that have been previously learnt into parts, determining how the parts relate to one another or how they interrelate, or how the parts relate to an overall structure or purpose. Cognitive process of analyzing includes differentiating, organizing, and attributing, and ability to distinguish between the components or parts. When persons have completed an analysis successfully, they illustrate this mental function by creating spreadsheets, surveys, charts, or diagrams, or graphic representations.

Evaluate refers to making judgments based on criteria and standards through checking and criticizing. The cognitive process of evaluating includes critiques, recommendations, and evaluation reports. In Revised Bloom's Taxonomy evaluating comes before creating and is often one of essential precursory behaviors before a person creates something.

Create refers to putting elements together to form a coherent or functional whole; reorganizing elements into a new pattern or structure through generating, planning, or producing. Creating requires users to put parts together in a new way, or synthesize parts into something new and different by producing a new form or product. This mental process is the most difficult among the six levels of Revised Bloom's Taxonomy.

In addition, Anderson and Krathwohl's Taxonomy (2001) has categorized the six levels of Revised Bloom's Taxonomy into two categories namely Lower Order Thinking Skills (LOTS) and Higher Order Thinking Skills (HOTS).

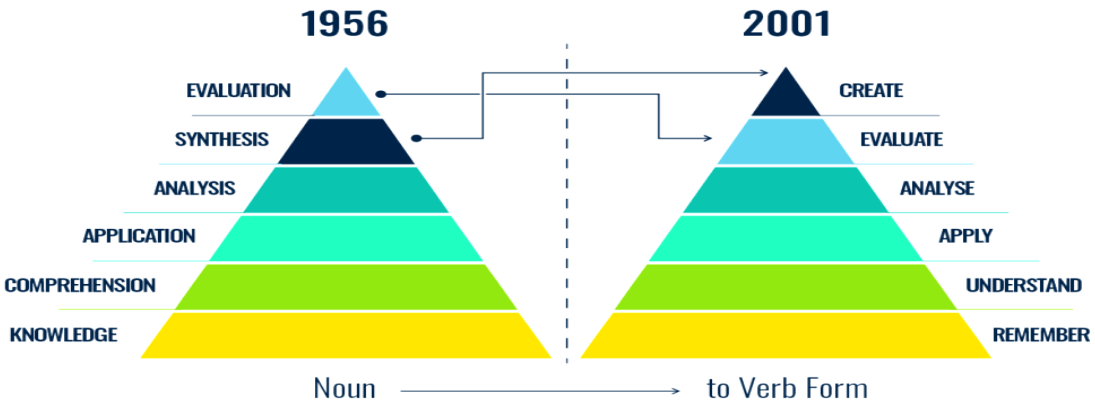
Lower Order Thinking Skills (LOTS) are the basic/foundational cognitive processes and skills that learners have to acquire before they can move to Higher Order Thinking Skills (HOTS). Lower Order Thinking Skills include remember, understand, and analyze.

Higher Order Thinking Skills (HOTS) are the cognitive processes that require thinking at a more complex, higher level and have more generalized benefits. Higher Order Thinking Skills (HOTS) include analyze, evaluate and create.

2.16 Comparison between Original and Revised Bloom's Taxonomy

In the revised Bloom's Taxonomy, words representing instructional goals in the original version are replaced by action verbs. The two highest levels of taxonomy in the original version (synthesis and evaluation) are changed to evaluate and create respectively. The cognitive processes associated with each level are modified. For example, ability to remember in revised version includes recognizing and recalling while original version includes only recalling information.

Figure 4: Comparison between Original Bloom's Taxonomy (1956) and Revised Bloom's Taxonomy (2001)



Source: *https://www.growthengineering.co.uk/what-can-blooms-taxonomy-tell-us-about-online-learning/*

2.17 Changes in Revised Bloom's Taxonomy

There are three main changes in Revised Bloom Taxonomy, namely terminology, structure, and emphasis (Forehand, 2005; Krathwohl & Anderson, 2002). Terminological changes are seen in two regulations. 1) Bloom's six levels of cognitive process in noun form are changed to verb form in Revised Bloom's Taxonomy. In addition, 'knowledge' at the bottom is renamed 'remember', 'comprehension' in the second level is renamed 'understand', 'synthesis' and 'evaluation' in the fifth and sixth level are renamed 'evaluate' and 'create' respectively (Forehand, 2005). Structural changes involve classification in original Bloom's Taxonomy which is structured in one-dimensional form—Cognitive Process Dimension. Classification in Revised Bloom's Taxonomy is structured in two dimensional forms, namely Knowledge Dimension and Cognitive Process Dimension

(see Table 1) and 19 sub-categories (See Figure 5). Knowledge dimension is in noun form to describe the content of knowledge to be learnt namely factual knowledge, conceptual knowledge, procedural knowledge, and metacognitive knowledge. Cognitive process dimension is in verb form to describe what students learn to do with knowledge in a particular dimension (Amer, 2006). (See Table 1)

Table 1: The Two Dimensions of Revised Bloom's Taxonomy

	Cognitive Process Dimension					
Knowledge Dimension	Remember	Understand	Apply	Analyze	Evaluate	Create
Factual Knowledge						
Conceptual Knowledge						
Procedural Knowledge						
Metacognitive Knowledge						

Source: Krathwohl, 2002

Figure 5: Structure of the Cognitive Process Dimension of the Revised Bloom's Taxonomy

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 of 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 judgments 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***

Source: Krathwohl, 2002

Changes in Emphasis

A shift from one dimensional form in Original Bloom's Taxonomy to two dimension form in Revised Bloom's Taxonomy enables teachers to use Revised Bloom's Taxonomy as a "more authentic tool in terms of curriculum planning, instruction delivery, and assessment" (Forehand, 2005). Teachers can use intersection of

knowledge dimension and cognitive process dimension to select teaching activities, identify which knowledge teachers expect students to learn and to determine which cognitive process dimension to be used (Pickard, 2007).

2.18 Advantages and Critiques of Revised Bloom's Taxonomy

Advantages of Revised Bloom's Taxonomy

Forehand (2005) argued that the Revised Taxonomy had more meaningful systematic classification for thinking and learning processes. Six levels in structurally cumulative and hierarchical system constituted a more succession that enabled teachers to process teaching and learning and to evaluate students' skills. The Revised Bloom's Taxonomy provided essential requirements for teachers to decide upon how to spend the classroom time to meet educational goals with educational goals with local, regional and national standards. The Revised Bloom's Taxonomy clarified the coherence of purpose, goal, essential question and target with each lesson plan and contained 19 subcategories and two dimensions that provided teachers with a powerful tool to develop better lesson plans. Bümen (2007) remarked that the Revised Bloom's Taxonomy enabled teachers and researchers to utilize qualitative data collection tools or recent approaches such as performance-based and authentic evaluation. The Revised Bloom's Taxonomy made up the deficiencies of the Original Taxonomy that could not accommodate with learning trends and theories of the 21st century such as outcome-based learning, individualized learning, and constructivism.

Critiques of the Revised Bloom's Taxonomy

Yüksel (2007) commented that the Revised Taxonomy did not bring a radical change on to Original Bloom's Taxonomy, yet the revised taxonomy provided some significant innovations. The subcategories of all levels in the original table have been made wider and more comprehensible.

2.19 Application of Revised Bloom's Taxonomy to Teaching and Learning

The goal of Bloom's Taxonomy is to help teachers 1) develop teaching plan and map students' learning within a single class or the whole courses, 2) set achievable learning goal/ objectives, 3) evaluate and mobilize learners' learning to higher level correctly and objectively, and 4) gauge students' learning progress by matching their

learning actions with the Taxonomy. The final goal of learning according to Revised Bloom's Taxonomy is to enable students to proceed form LOTS to HOTS. This means teachers should encourage students to go beyond memorization and use HOTS strategies/ terminologies that reflect their higher-order thinking skill. Research on skills needed for the 21st century work titled *Partnership for 21 Century Skills* confirm that higher-order thinking skills is essential for people of 21st century to find and secure good job and live a successful life (Wagner, 2018; Collins, 2014). The Partnership for the 21st Century Skills Framework which influences educational reformation worldwide nowadays points out that necessary skills for 21 century students are critical thinking and problem-solving; communications, information, and media literacy; collaboration, teamwork, and leadership; creativity and innovation; Computing and ICT literacy; career and learning self-reliance; and cross-cultural understanding. Tony Wagner (2010) has conducted research into the skills people of the 21st century need for quality survival and found seven survival skills. They are (1) critical thinking and problem solving, (2) collaboration across networks and leading by influence, (3) agility and adaptability, (4) initiative and entrepreneurialism, (5) effective oral and written communication, (6) accessing and analyzing information, and (7) curiosity and imagination. These higher-order thinking skills are essential for young generation because these skills activate their mind. In other words, these skills enable them to link past experience to the new information they access or to new problems they face. Young people who have these skills can comprehend new information, analyze and make decision to solve new and unfamiliar situations/ problems more efficiently. Teachers should mobilize students to elevate their thinking skills by asking them with questions or assigning them to do activities in the domain of higher-order thinking skills.

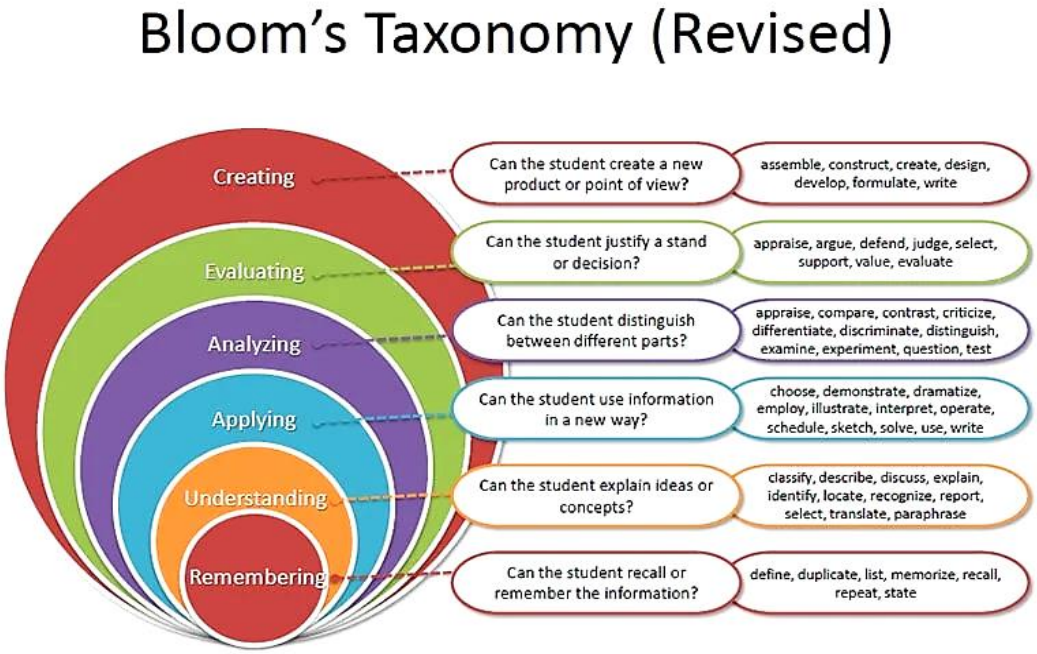
Reading comprehension is very essential for students' cognitive development. Without sufficient and quality reading, students cannot have contents for thinking. Teachers can make use of reading comprehension to develop students' HOTS in steps. First, teachers should employ different reading models to help students comprehend and construct meaning on the texts they read. Second, teachers should help students to go beyond comprehension which is in the domain of LOTS by

indulging students to deeper thinking process or HOTS by encouraging them to link the schemata to analyze, criticize, and evaluate new information/ contents they have found in the text they have read. Third, teachers should use technical questions, actions words and verbs associated with the highest-order thinking domain (HOTS) to encourage students to apply what they have discovered to create and innovate.

2.20 Application of Revised Bloom's Taxonomy Verbs and Questions Stems to Enhance Critical Thinking

As critical thinking is a cognitive activity that involves mental processes such as attention, communication, discovery of the truth, categorization, selection, problem solving, creativity, decision making, evaluation, and judgment, (Cottrell, 2011); Yang & Gamble, 2013; Tuzlukova, Busaidi, & Burns, 2017), Revised Bloom's Taxonomy (including Bloom's Taxonomy) is a set of thinking skills starting from lower to higher level of thinking ability. Therefore, Revised Bloom's Taxonomy (including Bloom's Taxonomy) and critical thinking go hand in hand to enhance students' critical thinking (Mulnix, Elder and Paul, 2012). This means when teachers apply Revised Bloom's Taxonomy to the teaching/ learning process, teachers cultivate students' critical thinking ability. Tristantie et al. (2020) advised teachers to use questions, assignment, activities, and projects to challenge students to progress from simple to complex thinking through Revised Bloom's Taxonomy six levels of increasing complexity. The following diagrams and tables have provided framework for selecting verbs and questions that reflect lower-order thinking to higher order thinking.

Figure 6: Revised Bloom's Taxonomy Framework



Source: *https://www.researchgate.net/figure/Figure-1-Blooms-taxonomy-revised_fig1_347677926*

In addition, scholars have developed a table of verbs for use to reflect an advance from lower-order thinking to higher-order thinking. Teachers can consult this table to choose verbs for structuring assignment and activities so as to enable students to mobilize a progress from lower-order thinking to higher order thinking.

Table 2: List of Verbs in Each Level of Revised Bloom's Taxonomy

REVISED Bloom's Taxonomy Action Verbs

Definitions	I. Remembering	II. Understanding	III. Applying	IV. Analyzing	V. Evaluating	VI. Creating
Bloom's Definition	Exhibit memory of previously learned material by recalling facts, terms, basic concepts, and answers.	Demonstrate understanding of facts and ideas by organizing, comparing, translating, interpreting, giving descriptions, and stating main ideas.	Solve problems to new situations by applying acquired knowledge, facts, techniques and rules in a different way.	Examine and break information into parts by identifying motives or causes. Make inferences and find evidence to support generalizations.	Present and defend opinions by making judgments about information, validity of ideas, or quality of work based on a set of criteria.	Compile information together in a different way by combining elements in a new pattern or proposing alternative solutions.
Verbs	• Choose • Define • Find • How • Label • List • Match • Name • Omit • Recall • Relate • Select • Show • Spell • Tell • What • When • Where • Which • Who • Why	• Classify • Compare • Contrast • Demonstrate • Explain • Extend • Illustrate • Infer • Interpret • Outline • Relate • Rephrase • Show • Summarize • Translate	• Apply • Build • Choose • Construct • Develop • Experiment with • Identify • Interview • Make use of • Model • Organize • Plan • Select • Solve • Utilize	• Analyze • Assume • Categorize • Classify • Compare • Conclusion • Contrast • Discover • Dissect • Distinguish • Divide • Examine • Function • Inference • Inspect • List • Motive • Relationships • Simplify • Survey • Take part in • Test for • Theme	• Agree • Appraise • Assess • Award • Choose • Compare • Conclude • Criteria • Criticize • Decide • Deduct • Defend • Determine • Disprove • Estimate • Evaluate • Explain • Importance • Influence • Interpret • Judge • Justify • Mark • Measure • Opinion • Perceive • Prioritize • Prove • Rate • Recommend • Rule on • Select • Support • Value	• Adapt • Build • Change • Choose • Combine • Compile • Compose • Construct • Create • Delete • Design • Develop • Discuss • Elaborate • Estimate • Formulate • Happen • Imagine • Improve • Invent • Make up • Maximize • Minimize • Modify • Original • Originate • Plan • Predict • Propose • Solution • Solve • Suppose • Test • Theory

Source: *https://studylib.net/doc/13379875/revised-bloom%E2%80%99s-taxonomy-action-verbs-*

2.21 Levels of reading questions

According to Revised Bloom's Taxonomy, questions play important roles for structuring students' level of cognitive process. Functions of questions in each of the six levels are as follows.

Remembering questions are questions that induce students to locate and retrieve relevant knowledge in long-term memory that is consistent with presented material (e.g., recognize the dates of important events in history).

Understanding questions are questions for students to change from one form of representation (e.g., numerical) to another (e.g., paraphrase important speeches and documents); find a specific example or illustration of a concept or principle (e.g., give examples of various artistic painting styles); determine that something belongs to a category (e.g., classify observed or described cases of mental disorders): abstract a general theme or major point(s) (e.g. write a short summary of the event portrayed on a videotape); draw a logical conclusion from presented information (e.g., in learning a foreign language, infer grammatical principles from examples); and detect correspondences between two ideas, objects, and the like (e.g., compare historical events to contemporary situations); construct a cause-and-effect model of a system(e.g., explain the causes of important 18th century events).

Applying questions are questions for students to apply a procedure to a familiar task (e.g., divide one whole number by another whole number, both with multiple digits); and apply a procedure to an unfamiliar task (e.g., use Newton's Second Law in situations in which it is appropriate).

Analyzing questions are questions for students to distinguish relevant from irrelevant parts or important from unimportant parts of presented material (e.g., distinguish between relevant and irrelevant numbers in a mathematical ward problem); determining how elements fit or function within a structure (e.g., structure evidence in a historical description into evidence for and against a particular historical explanation); and determine a point of view, bias, values, or intent underlying presented material (e.g., determine the point of view of the author of an essay in terms of his or her political perspective).

Evaluating questions are questions for students to detect inconsistencies or fallacies within a process or product; determine whether a process or product has internal consistency; detect the effectiveness of a procedure as it is being implemented (e.g., determine if a scientist's conclusions follow from observed data); and detect inconsistencies between a product and external criteria, determine whether a product has external consistency; detect the appropriateness of a procedure for a given problem (e.g., judge which of two methods is the best way to solve a given problem).

Creating questions are questions for students to come up with alternative hypotheses based on criteria (e.g., generate hypotheses to account for an observed phenomenon); devise a procedure for accomplishing some task (e.g., plan a research paper on a given historical topic); and invent a product (e.g., build habitats for a specific purpose).

Moreover, Revised Bloom's Taxonomy has also provided a framework for structuring questions from lower-order thinking to higher-order thinking. *Lower order thinking questions* are the questions which ask the student use basic/foundational cognitive processes and skills namely remember, understand, and apply the material previously read or learnt. In other words, they are the questions that match the first three levels of revised Bloom's Taxonomy. These questions aim at developing lower-order thinking skills (LOTS). *Higher order thinking questions* are the questions which ask students to use more complex and higher cognitive processes for generalizing the materials/ information/ knowledge that have been previously gained. In other words, they are the questions that match the top three levels of revised Bloom's Taxonomy including analyze, evaluate and create. These questions aim at developing higher-order thinking skills (HOTS)

The use of questions that help students progress from lower-order thinking to higher-order thinking will work best if teachers follow the guideline below.

- The questions are planned and closely linked to the objectives of the lesson.
- Questioning follows the teaching of content or skills.

- Closed questions are used to check understanding and recall; open questions are used to generate discussion and debate.
- Open climate during discussion is strictly maintained. Any answer from any student deserves attentive listening with respect. There are no stupid answers.
- Questions are planned to increase through the cognitive levels from lower-order thinking to higher-order thinking.

Table 3, a table of question stems (prompts) is a valuable tool for teachers to generate questions that respond to each level in the taxonomy. Below is a list of question stems (prompts) for all levels that teacher in the class can use.

Table 3: Revised Bloom's Taxonomy Question Stems (Prompts)

Sample Question Stems (prompts) Based on Revised Bloom's Taxonomy

Remember	Understand	Apply
Who? Where? Which one? What? How? Why? How much? How many? When? What does it mean? What happened after? What is the best one? Can you name all the…? Who spoke to …? Which is true or false?	What does this mean? Which are the facts? State in your own words. Is this the same as …? Give an example. Select the best definition. Condense this paragraph. What would happen if...? Explain why . . . What expectations are there? Read the graph (table). What are they saying? What seems to be …? Is it valid that …? What seems likely? Show in a graph, table.	Predict what would happen if ... Choose the best statements that apply. Judge the effects of … What would result …? Tell what would happen if … Tell how, when, where, why… Tell how much change there would be if … Identify the results of … Write in your own words… How would you explain …?

	Which statements support …? What restrictions would you add? Outline . . . What could have happened next? Can you clarify. . .? Can you illustrate . . . ? Does everyone think in the way that … does?	Write a brief outline … What do you think could have happened next? Who do you think…? What was the main idea …? Clarify why … Illustrate the … Does everyone act in the way that… does? Draw a story map. Explain why a character acted in the way that he did. Do you know of another instance where …? Can you group by characteristics such as …? Which factors would you change if …? What questions would you ask of …? From the information given, can you develop a set of instructions about …?
Analyze	**Evaluate**	**Create**
What is the function of …? What's fact? Opinion? What assumptions …? What statement is relevant?	What fallacies, consistencies inconsistencies appear? Which is more	Can you design a…to…? Can you see a possible solution to …?

What motive is there? What conclusions? What does the author believe? What does the author assume? State the point of view of … What ideas apply? What ideas justify the conclusion? What's the relationship between? The least essential statements are… . What's the main idea? Theme? What literary form is used? What persuasive technique is used? Determine the point of view, bias, values, or intent underlying presented material. Which events could not have happened? If … happened, what might the ending have been? How is … similar to …? What do you see as other possible outcomes? Why did … changes occur? Can you explain what must have happened when …? What were some of the motives behind …?	important, moral, better, logical, valid, appropriate? Find the errors. Is there a better solution to…? Judge the value of … What do you think about …? Can you defend your position about …? Do you think…is a good or bad thing? How would you have handled…? What changes to … would you recommend? Do you believe …? How would you feel if …? How effective are …? What are the consequences of …? What influence will … have on our lives? What are the pros and cons of…? Why is … of value? What are the alternatives? Who will gain and who	If you had access to all resources, how would you deal with …? Why don't you devise your own way to …? What would happen if? How many ways can you…? Can you create new and unusual uses for …? Can you develop a proposal which would…? How would you test …? Propose an alternative. How else would you …? State a rule.

What was the turning point? What are some of the problems of…? Can you distinguish between …?	will lose?	

Adapted from Pohl, Michael (2000) *Learning to Think, Thinking to Learn: Modes and Strategies to Develop a Classroom Culture of Thinking*. Cheltenham, Vic.: Hawker Brownlow Education.

Table 4: Summary of Revised Bloom's Taxonomy Verbs and Question Stems (Prompts)

	Remember	**Understand**	**Apply**
VERBS	Tell, list, describe, relate, locate, write, find, state name, identify, label, recall, define, recognize, match, reproduce, memorize, draw, select, write, recite	Explain, interpret, outline, discuss, distinguish, predict, restate, translate, compare, describe, relate, generalize, summarize, paraphrase, convert, demonstrate, visualize, find out more information about	Solve, show, use, illustrate, construct, complete, examine, classify, choose, interpret, make, change, apply, produce, translate, calculate, manipulate, modify
	Analyze	**Evaluate**	**Create**
	Analyze, distinguish, examine, compare, contrast, investigate categorize, identify,	Judge, select, choose, decide, justify, debate, verify, argue, recommend,	Create, invent, compose predict, plan, construct, design, imagine, propose devise,

	explain, separate, advertise, take apart, differentiate, subdivide, deduce	assess, discuss, rate, prioritize, determine, weigh, critique, evaluate, defend	formulate, combine, hypothesize, originate, add to, forces
	Remember	**Understand**	**Apply**
SAMPLE QUESTION STEMS	What happened after...? How many...? Who was it that...? Can you name the...? Describe what happened at.... Who spoke to...? Can you tell why...? Find the meaning of… What is...? Which is true or false...?	Can you write in your own words...? Can you write a brief outline...? What do you think could have happened next...? Who do you think...? What was the main idea...? Can you distinguish between...? What differences exist between...? Can you provide an example of what you mean...? Can you provide a definition for...?	Do you know another instance where...? Could this have happened in...? Can you group by characteristics such as...? What factors would you change if...? Can you apply the method used to some experience of your own...? What questions would you ask of...? From the information given, can you develop a set of instructions about...? Would this information be useful if you had...?

	Analyze	Evaluate	Create
	If ... happened, what might the ending have been? How was this similar to...? What was the underlying theme of...? What do you see as other possible outcomes? Why did ... changes occur? Can you compare your ... with that presented in...? Can you explain…? What must have happened when...? What are some of the problems of...? Can you distinguish between...? What were some	Is there a better solution to...? Judge the value of....? Can you defend your position about...? Do you think ... is a good or a bad thing? How would you have handled...? What changes to ... would you recommend? Do you believe…? Are you a..person? How would you feel if...? How effective are...? What do you think about...?	Can you design a ... to ... ? Why not compose a song about...? Can you see a possible solution to...? If you had access to all resources how would you deal with...? Why don't you devise your own way to deal with...? What would happen if...? How many ways can you...? Can you create new and unusual uses for...? Can you write a new recipe for a tasty dish? Can you develop a proposal which would...?

2.22 Types of reading questions based on Revised Bloom's Taxonomy (2001)

The following are sample reading questions based on revised Bloom's Taxonomy (2001). These question prompts are developed by Anderson, L. W., & Krathwohl, D. R. (Eds.), published in 'A taxonomy for learning, teaching and assessing: A revision of Bloom's Taxonomy of educational outcomes':

Remember

The teacher should present information about the subject to the student, ask questions that require the student to recall the information presented and provide verbal or written texts about the subject that can be answered by recalling the information the students have learned. Sample questions are as follows.

What do you remember about _____?
How would you define _____?
How would you identify_____?
How would you recognize _____?
What would you choose___?
Describe what happens when _____?
How is(are) ?
Where is(are)_____?
Which one___?
Who was_____?
Why did____?
What is(are)_____?
When did___?
How would you outline ?
List the_____in order.

Understand

The teacher should ask students questions to help them understand the main idea of the materials that they student heard, viewed, and read; interpret or summarize the ideas in their own words. Sample questions are as follows.

How would you compare_____?

Contrast _____?

How would you clarify the meaning _ ?

How would you differentiate between _____?

How would you generalize _____ ?

How would you express_____ ?

What can you infer from_____?

What did you observe_____?

How would you identify _____?

How can you describe ___ ?

Will you restate_____?

Elaborate on_____.

What would happen if_____?

What is the main idea of_____?

What can you say about_____?

Apply

The teacher should ask students questions to check if they can apply an abstract idea in a concrete situation to solve a problem or relate it to prior experience. The teacher should provide opportunities for the student to use ideas, theories, or problem-solving techniques and apply them to new situations, review the student's work to ensure that he/she is using problem solving techniques independently and provide questions that require student to define and solve problems. Sample questions are as follows.

What actions would you take to perform___?

How would you develop _____ to present ?

What other way would you choose to_____?

What would the result be if_____?

How would you demonstrate _____?

How would you present _____?

How would you change_____?

How would you modify _____?

How could you develop _____?

Why does_____work?

How would you alter _____ to?

What examples can you find that_____?

How would you solve ?

Analyze

The teacher should ask students to break down a concept or idea into parts and show relationships among the parts. The teacher should allow time for students to examine concepts and ideas and to break them down into basic parts and require students to explain why they chose a certain problem-solving technique and why the solution work or does not work. Sample questions are as follows.

How can you classify _____ according to ?

How can you compare the different parts _____?

What explanation do you have for _____?

How is _____ connected to?

Discuss the pros and cons of _____.

How can you sort the parts _____?

What is the analysis of_____?

What can you infer_____?

What ideas validate_____?

How would you explain _____?

What can you point out about_____?

What is the problem with_____?

Why do you think_____?

Evaluate

The teacher should ask students to make informed judgments about the value of ideas or materials and use standards and criteria to support opinions and views. The teacher needs to have students demonstrate that they can judge, criticize, or interpret the processes, materials, methods by using standards and criteria. Sample questions are as follows:

What criteria would you use to assess_____?

What data was used to evaluate____?

What choice would you have made_____?

How would you determine the facts_____?

What is the most important_____?

What would you suggest_____?

How would you grade ___?

What is your opinion of_____?

How could you verify _____?

What information would you use to prioritize_____?

Rate the _____

Rank the importance of _____.

Determine the value of____ .

Create

The teacher should provide opportunities for students to assemble parts of knowledge into a whole using creative thinking and problem solving and require students to demonstrate that they can combine concepts to build new ideas for new situations. Sample questions are as follows:

What alternative would you suggest for_____?

What changes would you make to revise____?

How would you explain the reason_____?

How would you generate a plan to_____?

What could you invent_____?

What facts can you gather___?

Predict the outcome if_____.

What would happen if_____?

How would you portray _____?

Devise a way to ___ .

How would you compile the facts for __ ?

How would you elaborate on the reason_____?

How would you improve ___ ?

2.23 Previous Studies on Evaluating Reading Questions in EFL Textbooks

The following section presents recent studies on evaluating reading questions in EFL Textbooks in international arena conducted during 2018-2022 by (Al Raqqad & Ismail, 2018; Yuliana & Tungka, 2018; Tayyeh, 2021; Irawan & Diptoadi, 2022; Laila & Fitriyah, 2022; Mizbani et al., 2023; Ulum, 2022; Hafidah, 2023; Köksal et al., 2023).

Al Raqqad & Ismail (2018) in their study entitled 'Analyzing the reading questions of AP12 Textbook According to Bloom's Taxonomy' analyzed the lower and higher order thinking skills of reading comprehension questions in the Action Pack 12 English Language textbook for grade twelve students in Jordan. The researchers used the content analysis in collecting, analyzing, and classifying reading questions according to Bloom's Taxonomy of the Cognitive Domain. The researcher calculated the percentage and frequencies in each unit of the textbook. The findings showed that the reading comprehension questions covered all six levels of Bloom's Taxonomy cognitive levels (knowledge, comprehension, application, analysis, synthesis, and evaluation). The results showed that 79 questions focused on lower thinking processes (knowledge, comprehension, and application) while 35 questions looked at the higher level of thinking processes (analysis, synthesis, and evaluation). Findings from this research recommended that the textbook authors should further develop the content of the textbook and maintain a balance between the lower-order questions and the higher-order ones where multilevel questions should be used and included at the end of each reading passage.

A study by Yuliana & Tungka (2018) investigated critical thinking questions in the reading section of EFL Textbooks. The purpose of their research was to investigate how far EFL textbooks used for second grade students in senior high schools in

Indonesia accommodated critical thinking skill in the course book of reading comprehension sections. Questions in reading activities in two commercially published textbooks (Talk Active and Pathway to English) and one government-published EFL textbook (Stop Bullying Now) were evaluated based on Bloom's Revised Taxonomy and four levels of comprehension. The result showed that the reading sections of the target course books contained more LOTS than HOTS questions. The interesting finding was that the government-published EFL textbook was more ready-to-use to prepare students with critical thinking skill than the two commercially published textbooks as it had more HOTS questions than the other two textbooks.

In Iraq, Tayyeh (2021) analyzed reading questions available in the English textbook called 'English for Iraq' which was a textbook used for 2nd intermediate grade based on the cognitive domain of Bloom's taxonomy. The study indicated that there were some limitations in the reading questions presented in the textbook due to the unbalanced use of cognitive domain levels. The most dominant level of revised Bloom's taxonomy was the remember level.

Ulum (2022) used descriptive content analysis technique to discover to what degree the revised Bloom's taxonomy was referred in the reading questions of a globally written EFL reading course book. The findings of the study suggested that the reading course book was deficient in the higher-level of the cognitive domain highlighted in the revised taxonomy.

A study by Laila & Fitriyah (2022) analyzed the extent to which Revised Bloom's Taxonomy was incorporated into the reading questions in English textbooks. Using a qualitative content analysis method to analyze the questions and categorize them based on the Revised Bloom's Taxonomy, the findings showed that most of the questions in the English textbooks were focused on lower-order thinking skills, such as remembering and understanding. Higher-order thinking skills, such as analyzing, evaluating, and creating, were not adequately represented in the questions. The authors suggested that incorporating higher-order thinking skills in the questions would improve students' critical thinking skills and promote deeper learning.

Moreover, the study highlighted the need for English teachers to develop a better understanding of the Revised Bloom's Taxonomy and its application in designing effective reading comprehension questions.

The study entitled 'Evaluation of the Curriculum Textbooks is of Vital Importance in any English Language Teaching Context' by Mizbani et al. (2023) evaluated listening, speaking, reading, and writing activities of Iranian senior high school English textbook, Vision 2, based on Bloom's revised version of the cognitive domain. The study was conducted to determine the levels of cognition in Bloom's revised framework concerning the four language skills activities in this textbook; and investigated the teachers' and students' attitudes towards such activities through researcher-made questioners. The researchers used activities in the textbook and the workbook as research instrument to evaluate students' macro-skills of English language. The researchers used questionnaire distributed to 130 users of the textbook, 30 teachers, and 100 male and female high school students to collect data for analysis. The study found that activities were not beneficial for the students actively involved in the higher levels of the thinking process. Moreover, the result of the Chi-square test showed that the relationship between two groups of low-level and high-level was statistically significant. The analysis of the data obtained by questionnaires indicated that the activities failed to promote students' deep learning, particularly listening and speaking. There were demands for supplying assignments to engage the learners at higher levels of thinking orders; namely, analyzing, evaluating, and creating knowledge.

Irawan & Diptoadi (2022) conducted research on the issue of 'Reading as an essential skill in the mastery of a language as the more the students read, the more exposed they are to the target language. Giving reading comprehension questions that suit the students' thinking level has been widely known to foster critical thinking and reading comprehension.' Their study analyzed an EFL textbook for year X of high school based on the cognitive domain of the Revised Bloom's Taxonomy so as to (1) explore the cognitive level of the reading comprehension questions found in the textbook based on the Revised Bloom's Taxonomy and; (2) appropriate reading comprehension questions to supplement the EFL textbook to meet the Curriculum of 2013. The

findings showed that the proportion between LOTS and HOTS questions was 85.5% and 14.5%. Considering that the EFL textbook was dominated by LOTS questions, it was concluded that the EFL textbook was not appropriate for 10th -grade students. Therefore, this study proposed 84 supplementary reading questions in HOTS to the EFL textbook to allow the students to practice their reading skills through various cognitive processes. There was an increase of 20.4% in the percentage of HOTS questions and after the addition of the researcher's supplementary questions, the proportion between LOTS and HOTS questions became 65.1% for LOTS questions and 34.9% for HOTS questions.

Hafidah (2023) in the study entitled 'Analysis of Reading questions in English Workbooks for SMP/MTs by Using Revised Bloom Taxonomy' analyzed the cognitive process dimension and its dominant level of the reading questions in English workbooks published by CV Putra Nugraha for seventh grade students in academic year 2021/2022. This study used descriptive qualitative with content analysis method to analyze the 220 reading comprehension questions. The instrument of this study was the taxonomy analysis checklist table adapted from Anderson and Krathwohl (2001) to classify the levels of the cognitive dimension based on Revised Bloom Taxonomy. The result showed that from the six levels of cognitive process, there were three levels found in those workbooks. Those levels were Remembering, Understanding, and Analyzing. Meanwhile Applying, Evaluating and Creating levels were not found. Therefore, these workbooks contained Low Order Thinking Skills (LOTS) more than High Order Thinking Skills (HOTS). The conclusion was the reading comprehension questions in these English workbooks were not appropriate for use as a learning material to develop students' critical thinking.

Köksal et al. (2023) conducted a study to determine the degree to which the Revised Bloom's taxonomy was included into the reading sections of EFL textbooks developed for Turkish high school students. The research results indicated that the evaluated textbooks lacked the higher-level cognitive abilities outlined in the Revised Bloom's Taxonomy. Consequently, based on the results, the researchers indicated that reading sections of textbooks being written or to be published might refer to the Revised Bloom's Taxonomy for the development of students' critical thinking.

The following section presents recent studies on evaluating reading questions in EFL Textbooks in Thailand conducted during 2018-2022 by (Tangsakul et al., 2017).

In Thailand, Tangsakul et al. (2017) analyzed reading questions in two English language proficiency textbooks using Bloom's Revised Taxonomy. The two textbooks with the title *'Team Up in English 1-3*' and 'Grade 9 English O-NET Tests' were widely used in Thailand to assess students' English language proficiency, were examined. The results showed that most of the reading questions in both textbooks focused on the lower-order thinking skills of remembering and understanding, and applying with fewer questions related to higher-order thinking skills such as analyzing, evaluating, and creating. The study also found that the 'Grade 9 English O-NET Test' had a slightly higher proportion of higher-order thinking skills questions than the 'Team Up in English 1-3'. The study suggested that the reading questions in both textbooks primarily focused on lower-order thinking skills.

Suratha (2019) in her thesis with the title 'Exploring critical reading in the English textbooks for Thai students' explored components of critical reading skills in which supported the development of critical reading ability in 14 English textbooks used by Thai students in upper secondary school under Secondary Education Service Area Office (SESAO) 6, Chachoengsao province. The instrument used in the study was core critical reading skills checklist for upper secondary school English textbooks. Content analysis and descriptive statistics were employed to analyze result derived from the checklist. The result showed that textbook samples composed of different levels of critical reading components. While some levels of critical thinking skills were found in almost every textbook, some levels of critical thinking skills were hardly found. Moreover, the analysis of English textbooks used from the year 1980 to 2015 revealed that the levels of critical thinking skills presented in textbooks varied greatly.

In summary, the survey of previous studies on evaluating reading question in EFL textbooks in international context revealed that all textbooks under investigation contained reading questions that covered all levels of Revised Bloom's Taxonomy (including Bloom's Taxonomy), however, the number of reading questions in the

cognitive domain of lower level of Revised Bloom's Taxonomy or LOTS (remember, understand, and apply) were much greater than the number of reading questions in the cognitive domain of higher level of Revised Bloom's Taxonomy or HOTS (analyze, evaluate, and create) (Al Raqqad& Ismail, 2018); Yuliana & Tungka, 2018; Tayyeh, 2021; Ulum, 2022; Laila & Fitriyah, 2022; Mizbani et al., 2022; Irawan & Diptoadi, 2022; Hafidah, 2023; Köksal et al., 2023). The study by Yuliana & Tungka (2018) gave additional remarks that the government-published EFL textbooks in Indonesia accommodated more reading questions in higher level (HOTS) than commercially published textbooks and recommended that in Indonesia, government-published EFL textbooks were more ready-to-use to prepare students with critical thinking than commercially published textbooks. The study by Mizbani et al. (2023) found that using activities produced less benefit for promoting the higher levels of the thinking process than conventional classes. These studies recommended that the textbook authors should incorporate more reading questions and activities in HOTS to the reading passages so as to enhance students' critical thinking (Al Raqqad & Ismail, 2018; Köksal, Ulum & Yürük, 2023; Hafidah, 2023). Other studies recommended the need for English teachers to develop a better understanding of the Revised Bloom's Taxonomy and supplied additional questions and assignments to engage the learners at higher levels of thinking orders (Laila & Fitriyah, 2022; Mizbani et al., 2023; Irawan & Diptoadi, 2022; Hafidah, 2023). There was only one study on the topic 'Evaluating Reading questions in EFL Textbooks' available in Thailand context. The study conducted by Suratha (2019) revealed that English textbooks used in upper secondary school under Secondary Education Service Area Office (SESAO) 6, Chachoengsao province composed of different levels of critical reading components. While some levels of critical thinking skills were found in almost every textbook, some levels of critical thinking skills were hardly found. Moreover, the analysis of English textbooks used from the year 1980 to 2015 revealed that the levels of critical thinking skills presented in textbooks varied greatly. The study was conducted by Tangsakul et al. (2017) the results of the study were consistent with other study conducted in international context that most reading questions in the English textbooks under study were focused on the lower-order thinking skills than higher-order thinking skills. However, their study also found that the 'English O-NET Test'

for grade 9 students had a slightly higher proportion of higher-order thinking skills questions than the 'Team Up 1-3' for students in grade 7-9. The study recommended the importance of incorporating reading question for higher-order thinking skills to ensure that students were adequately prepared to succeed in future academic pursuits.

Based on the literature review, it was evident that previous studies mentioned earlier reflected the importance of evaluating English textbooks in order to ensure that they incorporated different levels of reading questions. However, studies on evaluating English textbooks with a particular reference to analyzing reading questions in Thailand were scarce. Therefore, this study was set out in order to investigate levels of reading questions in three English textbooks used in a junior high school in Thailand. The percentage of reading questions in each level of the revised Bloom's taxonomy (2001) was also explored. The results of the study were expected to increase awareness of all involved in the English language learning process about the cognitive levels of the reading questions covered in English textbooks. Furthermore, the results would be useful for teachers regarding the significance of evaluating English textbooks so as to achieve the curriculum objectives with particular reference to development of students' critical thinking.

2.24 Chapter Summary

This chapter presents existing literature on EFL textbooks evaluation with particular reference to the role of textbooks in improving critical thinking in EFL/ESL classrooms. This chapter discussed the evaluation of reading questions in English language textbooks based on Revised Bloom's taxonomy. Previous studies on evaluating reading questions in EFL textbook were examined.

CHAPTER III
RESEARCH METHODS

This chapter presents the research methods of the study. Firstly, the research design and paradigm are discussed. Secondly, description of data sources which includes the English textbooks titled *Action 1*, *Action 2* and *Action 3* and a reading question checklist is provided. Thirdly, data collection procedures and data analysis are discussed. Finally, the chapter ends with a chapter summary.

3.1 Research Design/Paradigm

This study was designed as qualitative research using content analysis to analyze reading questions in relationship with critical thinking on the basis of Revised Bloom's Taxonomy. Content analysis is "a research technique for making replicable and valid inferences from data to their context" (Krippendorff, 1980). This type of research involves gathering data that describe events and then organizes, tabulates, depicts, and describes the data collection (Glass & Hopkins, 1984). The qualitative research in this study involved investigating all reading texts in *Action 1*, *2*, and *3*; extracting reading questions from each reading text, and importing all reading questions in each reading text into a reading checklist that the researcher developed. This process enabled the researcher to arrange abundant raw data into visualized and manageable form for further analysis. Each reading question was further analyzed by referring to reading question checklist on the basis of Revised Bloom's Taxonomy and assigned each of reading questions to a certain level of the six levels of Revised Bloom's Taxonomy—Remember, Understand, Apply, Analyze, Evaluate, and Create. This study used descriptive statistics namely frequency and percentage to classify reading questions into a certain level of Revised Bloom's Taxonomy and indicate the extent of reading questions in *Action 1*, *2*, and *3* on the basis of Revised Bloom's Taxonomy. Percentage and ratio were used to classify reading questions into the categories Lower Order Thinking Skills (LOTS) and Higher Order Thinking Skills (HOTS) and to indicate the distribution of reading questions in the categories Lower Order Thinking Skills (LOTS) and Higher Order Thinking Skills (HOTS). The interpretation of the quantitative data mentioned earlier was eventually used to

analyze the suitability of *Action 1*, *2*, and *3* for promoting students' critical thinking and to recommend for teachers' utilization of the textbooks.

3.2 Setting

This research was conducted at a Catholic school located in the northeastern part of Thailand. It was a large-size (largest) private school with the student population of 3,081 and teacher population of 165. As a Catholic school, it was operated in accordance to the common directives of Catholic Education—the Catholic Education Charter and Gravissimum Education (The Encyclical on Catholic Education) and the National Education Scheme. Though being a school under the Catholic Church, the school was open for students of any religious belief and encouraged students of different religious belief to have sincere commitment to their own religion. The school gave equal importance to academic excellence and student formation (forming students to be good, moral, and responsible citizens).

Since English proficiency was one of the key competencies of the students in the school, the selection of most appropriate English textbook for English language curriculum was crucially important. The school academic committee selected *Action 1*, *2*, and *3* as the textbooks for fundamental English core courses for middle grade students at the school due to the following reasons. Firstly, *Action 1*, *Action 2* and *Action 3* were composed by a team of well-recognized experts in EFL, and the textbooks covered all the four macro language skills—listening, speaking, reading, and writing. Micro language skills such as grammar and vocabulary were also included and contents were arranged on the basis of Common European Framework of Reference for Languages (CEFR). Secondly, the textbooks provided varied reading texts for understanding cultural pluralism, cotemporary social issues, scientific and technological development, and information technology. Thirdly, the publisher provided almost all supported materials for learning, self-directed learning, and teaching such as teaching plan for each particular module, audio text for each particular reading text, Power Points, supporting website, and training support. Finally, the reading questions covered all the six levels of either original and revised Bloom's Taxonomy for promoting students' critical thinking.

3.3 Data Sources

Two data sources used in this study were 1) data sources derived from three English textbooks named *Action 1*, *Action 2* and *Action 3* and; 2) a reading question checklist to evaluate the level of thinking of each reading questions in each reading text in each module of the textbooks. The description of these data sources is as follows:

3.3.1 Action 1, 2, and 3

The sources of data in this research were derived from three English textbooks called *Action 1, Action 2 and Action 3* for 7th, 8th and 9th grade students. *ACTION 1, 2,* and *3* were Integrated Skill and Series Textbooks for developing English proficiency of students in lower secondary level, grades 7, 8, and 9. *Action 1* was used for teaching Basic English 1 for grade 7 students; *Action 2* was used for teaching Basic English 2 for grade 8 students; and *Action 3* was used for teaching Basic English 3 for grade 9 students. This Integrated Skill and Series Textbooks were composed by Virgina Evans and Jenny Dooly and published by Expressed Publishing in 2023. Every series of the textbook focused on the four macro-skills of English language learning: listening, speaking, reading, and writing (including micro language skills—grammar and vocabulary). The publisher claimed that *ACTION 1, 2,* and *3* could develop learners' English competency to level A2 or higher of the CEFR (Common European Framework of Reference for Language: Learning, Teaching, Assessment). This series of English textbook was proposed for use as an English textbook and published for use in Thailand by AksornChareon Tat ACT.,Co., Ltd in A.D.2023. The contents of the textbook were evaluated and approved for the conformity with the 'Common Contents of Foreign Language Learning' in accordance to the 'Core Curriculum of Basic Education, Thailand, B.E.2551 (A.D. 2008) by Asst. Prof. Phornsawan Sripor, Suphaporn Sippvesm, and Robert Cullen.

Each series of ACTION consisted of 10 Modules: Module 1, Module 2, Module 3, Module 4, Module 5, Module 6, Module 7, Module 8, Module 9, and Module 10. Each series was divided into 4 components: Start Unit at the beginning of the textbook which is the test of what have been previously learnt in the previous series; MODULES 1-10; Song sheets which are songs used for optional learning media for each module; Optional listening practice of each Module; Optional Vocabulary

Practice for each Module; Grammar Reference Section for each Module; List of Irregular Verbs; Pronunciation; and American English and British English Guide.

Each Module was divided into 6 parts called Unit, plus Introductory Unit (Summary of Contents in the Module previously learnt), and Self-Check (Review Exercise). The contents of each part of every Module or each Unit were as follows:

Table 5: Contents of Each Unit in a Particular Module of *ACTION 1*, *2*, and *3*

Units	Curriculum Contents	Unit Content
Introductory Unit		Summary of Contents in the Module previously learnt
Unit 1a	Common Content 1: Language for Communication and Common Content 4: Language for Community and Global Relationship	Reading Passage
Unit 1b	Common Content 1: Language for Communication and Common Content 4: Language for Community and Global Relationship	Reading pictorial and graphic information, songs, and vocabulary
Unit 1c	Common Content 1: Language for Communication and Common Content 4: Language for Community and Global Relationship	Reading Passage and Writing
Unit 1d	Common Content 2: Language and Culture Content 4: Language for Community and Global Relationship	Reading Passage
Unit 1e	Common Content 1: Language for Communication and Common Content 4: Language for Community and Global Relationship	Dialogue
Unit 1f	Common Content 3: English Language and Contents of other Disciplines Common Content 4: Language for Community and Global Relationship	Reading Passage
Self-Check		Review Exercise

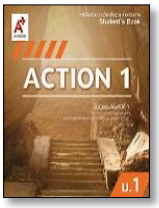
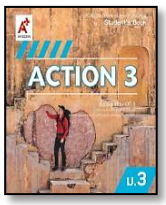
Table 5 indicated that each module in *ACTION 1*, *2*, and *3* focused on the four macro-skills of English competency: listening, speaking, reading, and writing (including micro language skills—grammar and vocabulary) and was divided into 6 parts called unit. Each unit was designed to meet two Common Contents of Foreign Language Learning' in accordance to the 'Core Curriculum of Basic Education, Thailand, B.E.2551 (A.D. 2008). 'Units a, b, c, e' were designed to meet Common Content 1: Language for Communication; and Common Content 4: Language for Community and Global Relationship. 'Unit d' was designed to meet Common Content 2: Language and Culture; and Common Content 4: Language for Community and Global Relationship. 'Unit f' was designed to meet Common Content 3: English Language and Contents of other Disciplines; and Common Content 4: Language for Community and Global Relationship.

Action 1 consisted of 10 units, including Starter Unit: School Day; Unit 1: My Favorites; Unit 2: My Home; Unit 3: My Castle; Unit 4: Strong Ties; Unit 5: The Animal Kingdom; Unit 6: In All Weathers; Unit 7: Glory Days; Unit 8: Special Days; Unit 9: Modern Living; and Unit 10: Holidays.

Action 2 consisted of 10 units, including Starter Unit: Unit 1: Day after Day; Unit 2: Let's Celebrate; Unit 3: Characters Larger than Life; Unit 4: Unexplained Mysteries; Unit 5: Our Planet; Unit 6: Travel; Unit 7: Health and Fitness; Unit 8: Food and Fashion; Unit 9: Modern Life; and Unit 10: Entertainment.

Action 3 consisted of 10 units, including Starter Unit; Unit 1: Lifestyles; Unit 2: Narrow Escapes; Unit 3: Travel; Unit 4: The Media; Unit 5: Our Future; Unit 6: Safety Comes First; Unit 7: Profiles; Unit 8: Our precious Earth, Unit 9: Choices; and Unit 10: It's Fun.

Table 6: The English textbooks used for data sources are shown below:

No	Title	Author(s)	Publisher, Year	picture
1	Action students' book 1	Jenny Dooley &Virginia Evans	Aksorn CharoenTat. ACT., Bangkok, Thailand, 2020	
2	Action students' book 2	Jenny Dooley & Virginia Evans	Aksorn Charoen Tat. ACT.,Bangkok, Thailand, 2020	
3	Action students' book 3	Jenny Dooley &Virginia Evans	Aksorn CharoenTat. ACT., Bangkok, Thailand, 2020	

3.3.2 Reading Question Checklist

The second source of the data was a reading question checklist. This checklist was used to assign each reading question in each reading text in *Action 1*, *Action 2*, and *Action 3* into a certain level among the six levels of Revised Bloom's Taxonomy and to assign each reading question in each reading text in to either the category of the Lower Order Thinking Skills (LOTS) or Higher Order Thinking Skills (HOTS) of Revised Bloom's Taxonomy. The below was the Reading Question Checklist designed on the basis of the Revised Bloom's Taxonomy.

Table 7: Sample of Bloom's Taxonomy Reading Question Checklist
Book Number …

Module and Reading Passage	Reading Question Number	Levels of Reading Comprehension Questions					
		Lower-Order Thinking Skill (LOTS)			Higher-Order Thinking Skill (HOTS)		
		Remember	Understand	Apply	Analyze	Evaluate	Create
1	1						
	2						
	3						
	4						
	n						
2	1						
	2						
	3						
	4						
	n						
3	1						
	2						
	3						
	4						
	n						
4	1						
	2						
	3						
	4						
	n						
5	1						
	2						
	3						
	4						
	n						
6	1						
	2						
	3						
	4						
	n						
7	1						
	2						
	3						
	4						
	n						
8	1						

	2						
	3						
	4						
	n						
9	1						
	2						
	3						
	4						
	n						
10	1						
	2						
	3						
	4						
	n						
Total							

It is important to note that ***(n)*** refers to the succeeding numbers in sequence until the last item.

3.3.3 Revised Bloom's Taxonomy Analysis Table

This analysis table was used as a reference when the researcher analyzed and classified reading questions in each reading text in *Action 1*, *Action 2,* and *Action 3* into a certain level among the six levels of Revised Bloom's Taxonomy and to assign each reading question in each reading text in to either the category of the Lower Order Thinking Skills (LOTS) or Higher Order Thinking Skills (HOTS) of Revised Bloom's Taxonomy.

Table 8: Revised Bloom's Taxonomy Analysis Table

Level	Key Verbs	Question Stems
Remember: Recall data or information from long-term memory. This level emphasizes on recognizing and recalling.	Define, describe, identify, label, list, match, name, outline, recall, recognize, reproduce, select, state	• Where is…? • What did…? • Who was…? • When did…? • How many…? • Who were the main…? • How did … happen? • Which one…?
Understand: Determine the meaning, translation, and interpretation of instructions and problems. This level emphasizes on grasping the meaning, interpreting, classify, comparing, explaining, and summarizing.	Comprehend, convert, defend, distinguish, estimate, explain, extend, generalize, give examples, interpret, paraphrase, predict, rewrite, summarize, translate	• What does it mean…? • Which statement support…? • What is the main idea of…? • How would you summarize…? • How would you paraphrase the meaning…?
Apply: Use a concept in a new situation or unprompted use of an abstraction. This level emphasizes on the ability to recognize, execute, and implement a form or a pattern as a means of understanding.	Apply, change, compute, construct, demonstrate, discover, manipulate, modify, operate, predict, prepare, produce, relate, show, solve, use	What is the real example of that phenomenon? • What would happen to you if…? • How would you organize … to show...? • How would you solve the problem? • What other way would you plan to…?
Analyze: Separate material or	Analyze, break down,	• What things would you have used…?

Level	Key Verbs	Question Stems
concepts into component parts so that its organizational structure may be understood. This level emphasizes on detection of the relationships of the parts and of the way they are organized. It involves differentiating, organizing, and attributing	compare, contrast, diagram, deconstruct, differentiate, discriminate, distinguish, identify, illustrate, outline, relate, select, separate	• What things are similar /different? • What things couldn't have happened in real life? • What caused….to act the way he/she did? • Which of these statements are facts and which are opinions?
Evaluate: Make judgments about the value of ideas or materials based on the criteria and standards. It emphasizes on checking and giving critiques about an idea or value.	Appraise, compare, conclude, contrast, criticize, critique, defend, describe, discriminate, evaluate, explain, interpret, justify, relate, summarize	• Select the best .. • What do you think will happen to…? • What judgment would you make about…? • Which character would you like to meet? Why? • Was…good or bad? Why? • Did you like the story? Why? • What was the most important moment in the story and why? • What is your opinion of the…?
Create: Build a structure or pattern from diverse elements. Put parts together to form a	Categorize, combine, compile, compose, create, devise, design, explain, generate, modify, organize, plan, rearrange, reconstruct, relate,	• How would you improve…? • How would you change the plot...?

Level	Key Verbs	Question Stems
whole, with emphasis on creating a new meaning or structure. This category involves generating, planning, and producing	reorganize, revise, rewrite, summarize, tell, write	• What do all these pictures have in common? • How would use your imagination to draw a picture of…? • How would you write a different ending of…?

3.4 Data Collection Procedure

As sources of data for analysis were reading questions in the three textbooks namely Action 1, 2, and 3. Firstly, the researcher attempted to detect all reading questions and studied the nature of reading questions available in the three textbooks. In this study, the researcher found that there were four types of reading questions in the three textbooks namely, 1) true/false questions; 2) yes/no questions; 3) W/H questions (what, when, where, why, and how); 4) W/H questions preceded by instructions. The researcher counted all four types of reading questions as sources of the study. The researcher regarded true/false reading questions and yes/ no reading questions as the same type of questions and regarded W/H reading questions (what, when, where, why, and how) and W/H reading questions (what, when, where, why, and how) that followed instructions as the same type of questions. Secondly, the researcher collected and listed all reading questions available in all reading passages in each module of Action 1, Action 2, and Action 3 into the reading question checklist.

Thirdly, the researcher matched (marked by using the ☑) to assign each reading question in the reading question checklist into an appropriate level of Remember, Understand, Apply, Analyze, Evaluate, and Create and counted reading questions in the columns of Remember, Understand, and Apply as reading questions in the category Lower Order Thinking Skills (LOTS) and reading questions in the columns

of Analyze, Evaluate, and Create as reading questions in the category Higher Order Thinking Skills (HOTS). Fourthly, the researcher counted the total number of reading questions in levels of Remember, Understand, Apply, Analyze, Evaluate, and Create; and the total number of reading questions in the categories of LOTS and HOTS.

3.5 Data Analysis

The raw data in the Revised Bloom's Taxonomy were analyzed in two steps.

In the first step, the researcher used descriptive statistics namely frequency and percentage to analyze and classify the reading questions in each reading text in *Action 1*, *Action 2*, and *Action 3* into a certain level among the six levels of Revised Bloom's Taxonomy.

In the second step, the researcher analyzed and classified the data in the first step into the appropriate category of either HOTS or LOTS using Revised Bloom's Taxonomy. This step enabled the researcher to see the distribution of readings questions in HOTS and LOTS categories and the ratio of reading questions in HOTS and LOTS categories.

The quantitative data derived in the first and second step was eventually used to analyze the suitability of Action 1, 2, and 3 for promoting students' critical thinking and to recommend for teachers' utilization of the textbooks.

3.6 Ensuring Trustworthiness of Findings

In order to ensure trustworthiness of findings, another teacher holding a M.Ed. degree in English Language Teaching assisted the researcher in evaluating the reading questions. The researcher spent a day discussing with the assisted teacher about Revised Bloom's Taxonomy, reading questions checklist, and Revised Bloom's Taxonomy analysis table. The assisted teacher spent a day analyzing and classifying the reading questions in the given reading questions checklist into a certain level among the six levels of Revised Bloom's Taxonomy, and then analyzing and classifying the reading questions in the given reading questions checklist into an appropriate category of either HOTS and LOTS using Revised Bloom's Taxonomy. The data in the two checklists were eventually compared to see the agreement and

disagreement between the two raters, and then to determine inter-rater consistency. The researcher used Kappa coefficient (Cohen, 1960) to determine the consistency between the two raters. The Kappa coefficient value achieved was at 0.82. This Kappa coefficient value meant there was almost perfect agreement between the two raters (researcher and assist-researcher).

3.7 Chapter Summary

This current study applied a qualitative research design to investigate the levels of reading questions in the English textbooks, and the percentage of reading questions in each level of the Revised Bloom's taxonomy. Data sources were from three English textbooks titled *Action 1*, *Action 2* and *Action 3* and a reading question checklist. The reading question checklist was used to code and categorize all the reading questions in these textbooks based on Bloom's Revised Taxonomy (2001).

CHAPTER IV
FINDINGS

This chapter presents the analysis of reading questions of three textbooks, ACTION 1, 2, and 3 based on Revised Bloom' Taxonomy and the results are as follows:

4.1 Levels of reading questions in ACTION 1, 2 and 3 based on revised Bloom's Taxonomy.

This research employed Revised Bloom's Taxonomy to analyze the levels of reading questions in ACTION 1, 2, and 3. The results of the analysis are as follows.

4.1.1 Analysis of reading questions in ACTION 1 as Classified by Revised Bloom's Taxonomy

Each reading text in a particular unit of ACTION 1 was followed by either of the four types of reading questions mentioned earlier that reflected a particular level of Revised Bloom's Taxonomy as indicated in Table 9 below.

Table 9: Levels of reading questions in ACTION 1 as classified by Revised Bloom's Taxonomy

Category/Level of reading questions in Action 1	Number of Questions/All questions	Percentage
Remember	193/323	59.75%
Understand	48/323	14.86%
Apply	30/323	9.29%
Analyze	40/323	12.38%
Evaluate	3/323	0.93%
Create	9/323	2.79%

Table 9 shows that there are 323 reading questions in ACTION 1. These 323 questions were classified into each level of Revised Bloom's Taxonomy thus: In the level of Remember, there were 193 questions, accounting for 59.7 %; Understand 48 questions, accounting for 14.8 %; Apply 30 questions, accounting for 9.29 %;

Analyze 40 questions, accounting for 12.38 %; Evaluate 3 questions, accounting for 0.93 %; and Create 9 questions, accounting for 2.79 %.

4.1.2 Analysis of reading questions in ACTION 2 as classified by Revised Bloom's Taxonomy

Each reading text in a particular unit of ACTION 2 was followed by either of the four types of reading questions mentioned earlier that reflected a particular level of Revised Bloom's Taxonomy as indicated in Table 10 below.

Table 10: Levels of reading questions in ACTION 2 as classified by Revised Bloom's Taxonomy

Category/Level of reading questions in Action 2	Number of Questions/All questions	Percentage
Remember	107/326	32.82%
Understand	76/326	23.31%
Apply	41/326	12.58%
Analyze	69/326	21.17%
Evaluate	24/326	7.36%
Create	9/326	2.76%

Table 10 shows that there are 326 reading questions in ACTION 2. These 326 questions were classified into each level of revised Bloom's Taxonomy thus: In the level of Remember, there were 107 questions, accounting for 32.82 %; Understand 76 questions, accounting for 23.31 %; Apply 41 questions, accounting for 12.58 %; Analyze 69 questions, accounting for 21.17 %; Evaluate 24 questions, accounting for 7.36 %; and Create 9 questions, accounting for 2.76 %.

4.1.3 Analysis of reading questions in ACTION 3 as classified by Revised Bloom's Taxonomy

Each reading text in a particular unit of ACTION 2 was followed by either of the four types of reading questions mentioned earlier that reflected a particular level of Revised Bloom's Taxonomy as indicated in Table 11 below.

Table 11: Levels of reading questions in ACTION 3 as classified by Revised Bloom's Taxonomy

Category/Level of reading questions in Action 3	Number of Questions/All questions	Percentage
Remember	107/349	30.66%
Understand	85/349	24.36%
Apply	36/349	10.32%
Analyze	70/349	20.06%
Evaluate	34/349	9.74%
Create	17/349	4.87%

Table 11 shows that there are 349 reading questions in ACTION 3. These 349 reading questions were classified into each level of revised Bloom's Taxonomy thus: In the level of Remember, there were 107 questions, accounting for 30.66 %; Understand 85 questions, accounting for 24.36 %; Apply 36 questions, accounting for 10.32 %; Analyze70 questions, accounting for 20.06 %; Evaluate 34 questions, accounting for 9.74 %; and Create 17 questions, accounting for 4.87%.

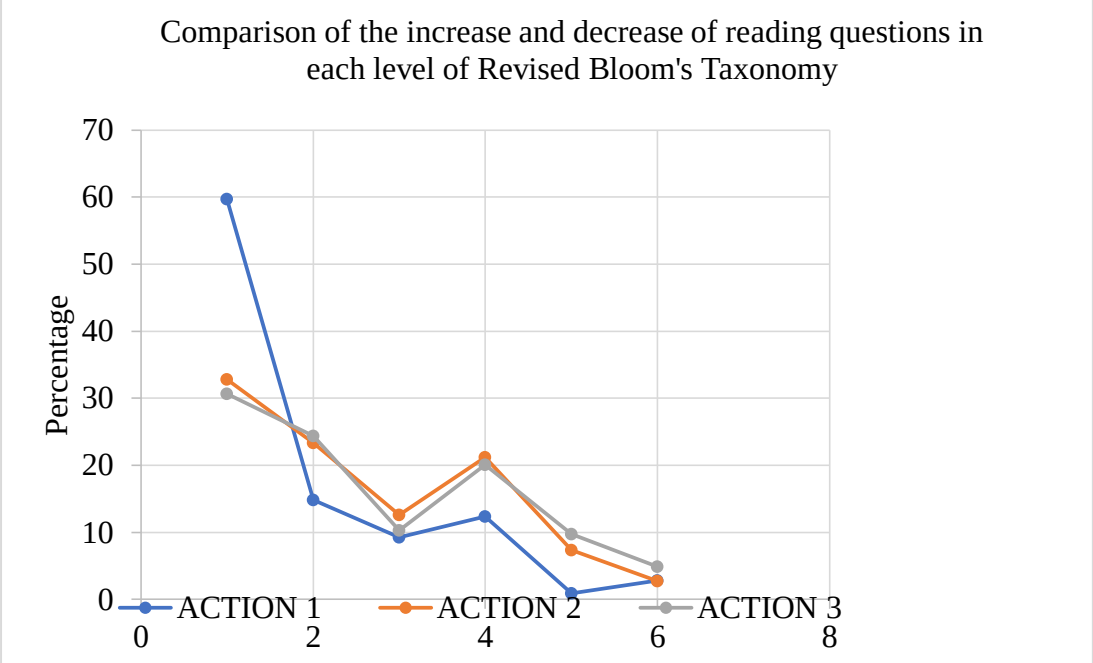
Table 12: Summary of the analysis of reading questions in ACTION 1, 2, and 3 as classified by Revised Bloom's Taxonomy

Category/Level of reading questions	**Action 1**		**Action 2**		**Action 3**	
	Number of questions	Percentage	Number of questions	Percentage	Number of questions	Percentage
Remember	193/323	59.75%	107/326	32.82%	107/349	30.66%
Understand	48/323	14.86%	76/326	23.31%	85/349	24.36%
Apply	30/323	9.29%	41/326	12.58%	36/349	10.32%
Analyze	40/323	12.38%	69/326	21.17%	70/349	20.06%
Evaluate	3/323	0.93%	24/326	7.36%	34/349	9.74%
Create	9/323	2.79%	9/326	2.76%	17/349	4.87%

Table 12 indicates that the number of or the percentage of reading questions in the lowest level of Revised Bloom's Taxonomy keep decreasing consistently from Action 1, to Action 2, Action 3, whereas the number of or the percentage of reading in other

levels of Revised Bloom's Taxonomy namely, Understand, Apply, Analyze, and Create keeps increasing consistently from Action 1, to Action 2, Action 3 in consistent with increasing learners' CEFR level and increasing series of ACTION. This figure implies that the three series of Action does not focus on the reading questions in lowest level of Revised Bloom' Taxonomy, but focus on reading questions in higher levels of Revised Bloom' Taxonomy.

Chart 1: Comparison of the increase and decrease of reading questions in each of the six levels of Revised Bloom's Taxonomy in ACTION 1, 2, and 3



Results of the comparison in Chart I indicate that the percentage of reading questions in the level of Remember keeps decreasing consistently in each series of ACTION, from 59.75 % in ACTION 1 to 32.82 % in ACTION 2 or decrease from ACTION 1 by 24.93 %; and 30.66 % in ACTION 3 or decrease from ACTION 2 by 2.16 % whereas percentage of reading questions in the levels of Understand, Apply, Analyze, Evaluate and Create mostly keeps increasing. Percentage of reading questions in the level of Understand increases from 14.86 % in ACTION 1 to 23.31 % in ACTION 2 or increases from ACTION 1 by 8.46 %, and 24.36 % in ACTION 3 or slightly increases from ACTION 2 by 1.05 %. Percentage of reading questions in the level of Apply increases from 9.29 % in ACTION 1 to 12.58 % in ACTION 2 or increases

from ACTION 1 by 3.29 %, but the percentage of reading questions in the level of Apply decreases from 12.58 % in ACTION 2 to 10.32 in ACTION 3 or slightly decrease by 2.26 %. Percentage of reading questions in the level of Analyze increases from 12.38 % in ACTION 1 to 21.17 % in ACTION 2 or increases from ACTION 1 by 8.79 %; but the percentage of reading questions in the level of Analyze decreases from 21.17 % in ACTION 2 to 20.06 in ACTION 3 or slightly decrease from ACTION 2 by 1.11 %. Percentage of reading questions in the level of Evaluate increases from 0.93 % in ACTION 1 to 7.36 % in ACTION 2 or increases from ACTION 1 by 6.43 %, and 9.74 % in ACTION 3 or slightly increases from ACTION 2 by 2.38 %. Percentage of reading questions in the level of Create decreases from 2.79 % in ACTION 1 to 2.76 % in ACTION 2 or slightly decreases from ACTION 1 by 0.03 %; but the percentage of reading questions in the level of Create increases from 2.76 % in ACTION 2 to 4.87 in ACTION 3 or slightly increase from ACTION 2 by 2.11 %.

4.2 Distribution of LOTS and HOTS in ACTION 1, 2, and 3 based on Revised Bloom's taxonomy

This research categorizes reading questions in ACTION 1, 2, and 3 as classified by Revised Bloom's Taxonomy into LOTS (Low Order Thinking Skill) and HOTS (High Order Thinking Skill). The results of the categorization are as follows.

Table 13: The Distribution of reading questions in ACTION 1 classified into LOTS and HOTS

Category/Level of reading questions	**Actions 1**	
	Number of questions/All questions	Percentage
Lower Order Thinking skills (LOTs)		
Remember	193/323	59.75%
Understand	48/323	14.86%
Apply	30/323	9.29%
Total	**271/323**	**83.90%**
Higher Order Thinking skills (HOTs)		
Analyze	40/323	12.38%
Evaluate	3/323	0.93%
Create	9/323	2.79%
Total	**52/323**	**16.10%**

Table 13 indicates that the numbers of 323 reading questions in ACTION 1 are classified into the category of LOTS (Low Order Thinking Skills) and HOTS (High Order Thinking Skills) thus: There are 271 reading questions in the category of LOTS, accounting for 83.90 %. There are 52 reading questions in the category of HOTS, accounting for 16.10 %. The ratio of LOTS and HOTS reading questions in ACTION 1 is 271:52 or 83.90%:16.10%.

Table 14: The Distribution of reading questions in ACTION 2 classified into HOTS and LOTS

Category/Level of reading questions	**Actions 2**	
	Number of questions/All questions	Percentage
Lower Order Thinking skills (LOTs)		
Remember	107/326	32.82%
Understand	76/326	23.31%
Apply	41/326	12.58%
Total	**224/326**	**68.71%**
Higher Order Thinking skills (HOTs)		
Analyze	69/326	21.17%
Evaluate	24/326	7.36%
Create	9/326	2.76%
Total	**102/326**	**31.29%**

Table 14 indicates that the numbers of 326 reading questions in ACTION 2 are classified into the category of LOTS (Low Order Thinking Skills) and HOTS (High Order Thinking Skills) thus: There are 224 reading questions in the category of LOTS, accounting for 68.71 %. There are 102 reading questions in the category of HOTS, accounting for 31.29 %. The ratio of LOTS and HOTS reading questions in ACTION 2 is 224:102 or 68.71%:31.29%.

Table 15: Distribution of reading questions in ACTION 3 classified into the category of HOTS and LOTS

Category/Level of reading questions	**Actions 3**	
	Number of questions/All questions	Percentage
Lower Order Thinking skills (LOTs)		
Remember	107/349	30.66%
Understand	85/349	24.36%
Apply	36/349	10.32%
Total	**228/349**	**65.33%**
Higher Order Thinking skills (HOTs)		
Analyze	70/349	20.06%
Evaluate	34/349	9.74%
Create	17/349	4.87%
Total	**121/349**	**34.67%**

Table 15 indicates that the numbers of 349 reading questions in ACTION 3 are classified into the category of LOTS (Low Order Thinking Skills) and HOTS (High Order Thinking Skills) thus: There are 228 reading questions in the category of LOTS, accounting for 65.33 %. There are 121 reading questions in the category of HOTS, accounting for 34.67 %. The ratio of LOTS and HOTS reading questions in ACTION 2 is 228:121 or 65.33%:34.67.

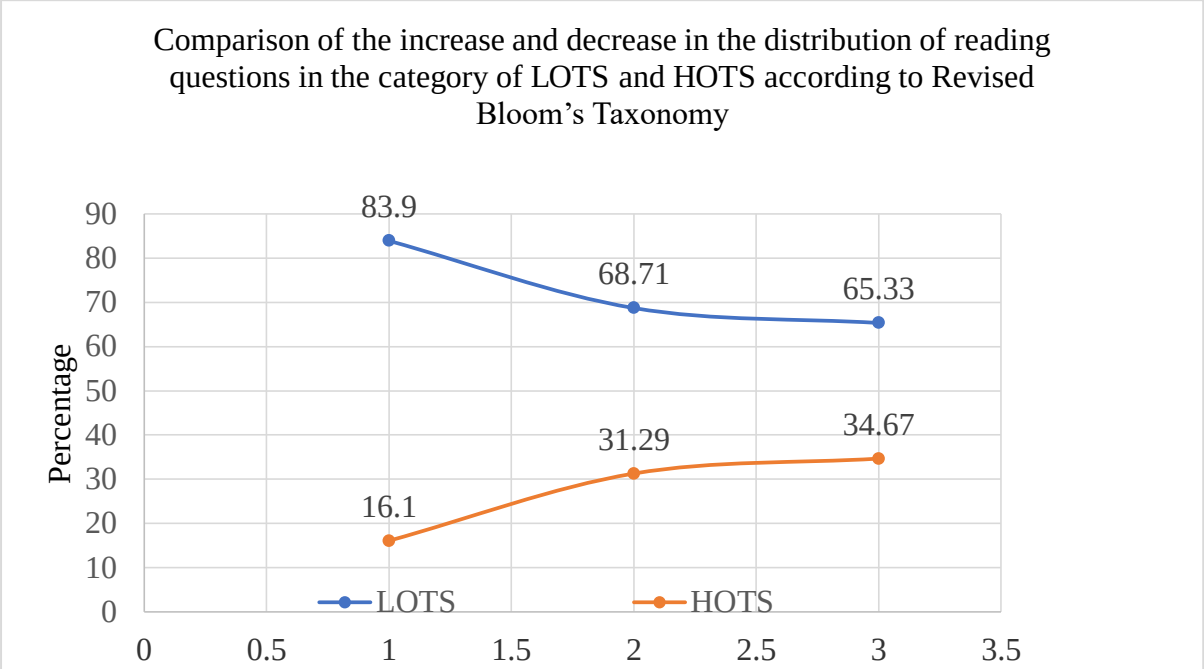
Table 16: Summary the Distribution of Reading questions in ACTION 1, 2, and 3 Classified into the Categories of LOTS and HOTS.

Category/ Level of reading questions	**Action 1**		**Action 2**		**Action 3**	
	Number of questions/All questions	Percentage	Number of questions/All questions	Percentage	Number of questions/All questions	Percentage
LOTs	271/323	83.90%	224/326	68.71%	228/349	65.33%
HOTs	52/323	16.10%	102/326	31.29%	121/349	34.67%

Table 16 indicates that the number of and the percentage of reading questions in ACTION 1, 2, and 3 keeping increasing from fewer number of questions and from lower percentage to greater number or higher percentage in reverse with series of

ACTION, but in consistent with learners' CEFR level. It means there are greater percentages of reading questions classified into LOTS in lower series of ACTION, and there are greater percentages of reading questions classified into HOTS in higher series of ACTION than lower series of ACTION. Percentage of reading questions in HOTS increases in consistent with greater series of ACTION.

Chart 2: Comparison of the increase and decrease in the distribution of reading questions in the categories of LOTS and HOTS in ACTION 1, 2, and 3 according to Revised Bloom's Taxonomy



Results of comparison in Chart 2 indicate that the overall percentage of reading questions in the category of Lower Order Thinking Skills (LOTS) keeps decreasing consistently in each series of ACTION, from 83.90 % in ACTION 1 to 68.71 % in ACTION 2 or decrease from ACTION 1 by 15.19 %; and 65.33 % in ACTION 3 or decrease from ACTION 2 by 3.38 %; whereas percentage of reading questions in the category of Higher Order Thinking Skills keep increasing consistently in each series of ACTION, from 16.10 % in ACTION 1 to 31.29 % in ACTION 2 or increases from ACTION 1 by 15.19 %, and 34.67 in ACTION 3 or increases from ACTION 2 by 3.38 %.

4.3 Chapter Summary

In this chapter, the researcher analyzed reading questions in ACTION 1, 2, and 3 so as to find answers to Research Objective One and Research Question Two. The analysis found that the percentage of reading questions in the low level of Revised Bloom's Taxonomy kept changing in reverse relationship with learners' CEFR level. It meant there were greater percentages of reading questions at the low level of Revised Bloom's Taxonomy in the lower series of ACTION; or in other words, there was a greater percentage of reading questions at the higher level of Revised Bloom's Taxonomy in higher series of ACTION than lower series of ACTION. This same relationship was also found in the analysis of reading questions in terms of Lots and HOTS. There were greater percentages of reading questions classified into LOTS in lower series of ACTION, and there were greater percentages of reading questions classified into HOTS in higher series of ACTION than in lower series of ACTION.

CHAPTER V

DISCUSSIONS AND CONCLUSION

This chapter presents discussions of results of the analysis of reading questions in *ACTION 1, 2,* and *3* according to Revised Bloom's Taxonomy followed by pedagogical implications, limitations of the study, recommendations for future research, and a conclusion.

5.1 Summary of Findings

The analysis of the reading questions ACTION 1, 2, and 3 found that the three textbooks contained 998 reading questions. There were 323 reading questions, accounting for 32.36 % in ACTION 1; 326 reading questions, accounting for 32.67 % in ACTION 2, and 349 reading questions, accounting for 34.97 % in ACTION 3.

In ACTION 1, majority of the reading questions were in the level of remember in which there were 193 reading questions, accounting for 59.75 %; In the level of understanding, there were 48 reading questions, accounting for 14.86 %; In the level of applying in which there were 30 reading questions, accounting for 9.29 %; In the level of analyzing in which there were 40 reading questions, accounting for 12.38 %; In the level of evaluating in which there were 3 reading questions, accounting for 0.93 %; and in the level of creating in which there were 9 reading questions, accounting for 2.79 %. It is observable that Action 1 is dominated by the cognitive process of remember of Revised Bloom's Taxonomy. However, the percentage of reading questions in the level of remembering decreased sharply in ACTTION 2 from 59.75 % in ACTION 1 to 38.82 % in ACTION 2, and to 30.66 % in ACTION 3. Though the percentage of reading questions in the levels of Understanding, Applying, Analyzing, Evaluating and Creating were few in ACTION 1; the percentage of reading questions in the five levels mentioned earlier mostly kept increasing in ACTION 2 and 3. Percentage of reading questions in the level of Understanding increased from 14.86 % in ACTION 1 to 23.31 % in ACTION 2 or increased from ACTION 1 by 8.46 %, and 24.36 % in ACTION 3 or slightly increased from ACTION 2 by 1.05 %. Percentage of reading questions in the level of Applying increased from 9.29 % in ACTION 1 to

12.58 % in ACTION 2 or increased from ACTION 1 by 3.29 %, but the percentage of reading questions in the level of Applying decreased from 12.58 % in ACTION 2 to 10.32 % in ACTION 3 or slightly decreased by 2.26 %. Percentage of reading questions in the level of Analyzing increased from 12.38 % in ACTION 1 to 21.17 % in ACTION 2 or increased from ACTION 1 by 8.79 %; but the percentage of reading questions in the level of Analyzing decreased from 21.17 % in ACTION 2 to 20.06 % in ACTION 3 or slightly decreased from ACTION 2 by 1.11 %. Percentage of reading questions in the level of Evaluating increased from 0.93 % in ACTION 1 to 7.36 % in ACTION 2 or increased from ACTION 1 by 6.43 %, and 9.74 % in ACTION 3 or slightly increased from ACTION 2 by 2.38 %. Percentage of reading questions in the level of Creating decreased from 2.79 % in ACTION 1 to 2.76 % in ACTION 2 or slightly decreased from ACTION 1 by 0.03 %; but the percentage of reading questions in the level of Creating increased from 2.76 % in ACTION 2 to 4.87 in ACTION 3 or slightly increased from ACTION 2 by 2.11 %. The summary of gradual decrement of reading questions in the level of Remembering in ACTION 1 to ACTION 2, and ACTION3 and increment of reading question in the levels of Understanding, Applying, Analyzing, Evaluating and Creating in ACTION 2 and 3 are presented in following parts.

5.2 Discussions of Findings

5.2.1 Levels of Reading questions in ACTION 1, 2 and 3 based on revised Bloom's Taxonomy.

Each reading text in a particular unit of ACTION 1, 2, and 3 is followed by reading questions that reflects a particular level of Revised Bloom's Taxonomy. The results of employing Revised Bloom's Taxonomy to analyze the levels of reading questions in ACTION 1, 2, and 3 are as follows.

From the analysis of the reading questions in the three textbooks, it is found that most of the reading questions belong to the Low Order Thinking Skill (LOTS) which includes remember, understand and apply. In *Action 1*, it is obvious that the reading questions in the LOTS account for 83.90% whereas the reading questions in the HOTS account for 16.10%. Some examples of the reading questions in the LOTS

include; Who are friends? Who are relative?, What are these words in your language?. On the other hand, some examples of the reading questions in the HOTS include; How does Spider Man get his special powers? What is the article about?, Design your ideal bedroom. Compare with your partner's.

In *Action 2*, it is found that most of the reading questions belong to the Low Order Thinking Skill (LOTS) which includes remember, understand and apply. In *Action 2*, the reading questions in the LOTS account for 68.71% whereas the reading questions in the HOTS account for 31.29%. It is obvious that the percent of reading questions in LOTS in *Action 2* is lower than the percent of reading questions in *Action 1*. However, the percent of reading questions in HOTS in *Action 2* is higher than the percent of reading questions in HOTS in *Action 1*. Some examples of the reading questions in the LOTS include; Which is your favorite day? Which city is each picture from?, Who wants revenge?. On the other hand, some examples of the reading questions in the HOTS include; Why should someone watch this program? What can you learn from watching this program? What type of texts are they: reviews or advertisements?

In *Action 3*, it is found that most of the reading questions belong to the Low Order Thinking Skill (LOTS) which includes remember, understand and apply. In *Action 3*, the reading questions in the LOTS account for 65.34% whereas the reading questions in the HOTS account for 34.66%. It is obvious that the percent of reading questions in LOTS in *Action 3* is lower than the percent of reading questions in *Action 1* and *Action 2*. However, the percent of reading questions in HOTS in *Action 3* is higher than the percent of reading questions in HOTS in *Action 1* and *Action 2*. Some examples of the reading questions in the HOTS include; What moral values does the story teach? What do you think happens in this extract?, What is the author's purpose?.

From the explanations above, it is obvious that the reading questions in the three textbooks frequently include LOTS more than HOTS. The factors that contribute to this fact according the researcher observation are: (1) Students studying English as

foreign language have difficulties in analyzing the text due to their limit of the vocabulary, the understanding of complex sentences, and their unfamiliarity with the material of the reading (Malinda et al., 2023). The authors of the textbook realize this fact and have clear intention to focus on reading questions in the category of LOTS. Malinda et al. (2023) and Broadwin & Gould (2017) supported this practice by arguing that this fact helps students to feel comfortable to learn English and answer reading questions because seventh grader students with the ages between 11-12 years old have good memory skills. (2) It seems that authors of the textbooks give more focus on comprehension, macro and micro language skills than critical thinking. (3) Teachers of English as foreign language especially in Asian culture feel more comfortable to engage students in LOTS questions than HOTS questions because engaging very young students in HOTS questions need efforts to drive students forward.

In *Action 1, Action2* and *Action 3*, although a number of reading questions in levels of analyze, evaluate, and create slightly increased, *Action 3* were still dominated by a number/ percentage of reading questions in the levels of remember, understand, and apply. The reason why the number/ percentage of reading questions in the level of analyze was greater because an ability to analyze needs the skill to understand, interpret, and explain relevant things. Reading questions of this level most probably ask students to arrange the sentence or text. Students need to analyze the sentence to make it clear and structured (Hadifah, 2023). The textbooks which are organized in this manner help students in junior high school in improving their critical thinking for their advancement to senior high school. However, the increment was limited because students had difficulties in analyzing the text due to their limit of the vocabulary and their unfamiliarity with the material of the reading (Malinda et al., 2022).

In summary, reading questions in each series of *ACTION* covered all the six levels of Revised Bloom's Taxonomy. This finding was consistent with the study conducted by Al (Al Raqqad & Ismail, 2018). However, Hafidah (2023) in the study entitled 'Analysis of Reading questions in English Workbooks for SMP/MTs by Using

Revised Bloom Taxonomy' found opposite result. Hafidah (2023) found that there were three low levels (Remembering, Understanding, and Applying) found in the workbooks she investigated. Meanwhile Applying, Evaluating, and Creating levels were not found. Köksal et al. (2023) found the same results in their study that the textbooks they evaluated lacked the higher-level cognitive abilities outlined in the updated Bloom's taxonomy. The opposite results shown by three different study mentioned earlier reminded educators/teachers that selecting appropriate textbook for use played very important role in promoting critical thinking. It was remarkable that the number of and the percentage of reading questions in high level of Revised Bloom's Taxonomy in ACTION keeping increasing from fewer number and from lower percentage to greater number and greater percentage in consistent with increasing learners' CEFR level and increasing series of ACTION. It means there are greater number of and greater percentage of reading questions in higher level of Revised Bloom's in ACTION 3 than in ACTION 2 and 1 and there are greater number of and greater percentage of reading questions in higher level of Revised Bloom's in ACTION 2 than in ACTION 1.

5.2.2 Identify the distribution of LOTS and HOTS in ACTION 1, 2, and 3 based on Revised Bloom's taxonomy

In ACTION 1 the ratio of reading questions in the category of Lower Order Thinking Skills (LOTS) and Higher Order Thinking Skills (HOTS) is 83.90%: 16.10%. However, the percentage of reading question in the category of Lower Order Thinking Skills (LOTS) keeps decreasing consistently in each series of ACTION, from 83.90 % in ACTION 1 to 86.71 % in ACTION 2 or decrease from ACTION 1 by 15.19 %; and 65.33 % in ACTION 3 or decrease from ACTION 2 by 3.38 %; whereas percentage of reading questions in the category of Higher Order Thinking Skills keeps increasing consistently in each series of ACTION, from 16.10 % in ACTION 1 to 31.29 % in ACTION 2 or increases from ACTION 1 by 15.19 %, and 34.67 in ACTION 3 or increases from ACTION 2 by 3.38 %. The decrement of reading questions in the category of Lower Thinking Skills in ACTION 1 to ACTION 2, and to ACTION 3; and the increment of reading questions in the category of Higher Thinking Order

(HOTS) in ACTION 1 to ACTION 2, and to ACTION 3 are presented in the following parts.

Among 323 reading questions in ACTION 1; there are 271 reading questions in the category of LOTS, accounting for 89.30 %. There are 52 reading questions in the category of HOTS, accounting for 16.10 %. The ratio of LOTS and HOTS in ACTION 1 is 271:52 or 83.90%:16.10%. This analysis shows Action 1 is dominated by reading questions in the category of LOTS and there is a very huge gap between the number/ percentage of reading questions in the category of LOTS and HOTS. This gap implies the textbook authors' clear intention to focus on reading questions in the category of LOTS. Malinda et al. (2022) and Broadwin & Gould (2017) argued that this gap helped students to feel comfortable to learn English and answer reading questions because seventh grader students with the ages between 11-12 years old have good memory skills.

Among 326 reading questions in ACTION 2; there are 224 reading questions in the category of LOTS, accounting for 68.71 %. There are 102 reading questions in the category of HOTS, accounting for 31.29 %. The ratio of LOTS and HOTS in ACTION 2 is 224:102 or 68.71%:31.29%. Like Action 1, Action 2 is dominated by reading questions in the category of LOTS. However, the gap between the number/ percentage of reading questions in the category of LOTS and HOTS reduces. However, Action 2 still reflects the textbook authors' clear intention to focus on reading questions in the category of LOTS because of Action 2 is for the same target group of students with the ages between 11-12 years old have good memory skills. (Malinda et al., 2022; Broadwin & Gould, 2017)

Among 349 reading questions in ACTION 3; there are 228 reading questions in the category of LOTS, accounting for 65.33 %. There are 121 reading questions in the category of HOTS, accounting for 34.67 %. The ratio of LOTS and HOTS in ACTION 2 is 228:121 or 65.33%:34.67. Like Action 1 and Action 2, Action 3 is dominated by reading questions in the category of LOTS. However, the gap between the number/ percentage of reading questions in the category of LOTS and HOTS is

less than Action 1 and 2. However, Action 3 still reflects the textbook authors' clear intention to focus on reading questions in the category of LOTS.

In summary, the percentage of reading questions in ACTION 1, 2, and 3 keeping increasing from fewer number of reading questions to greater number of reading questions, and from lower percentage reading questions in HOTS to greater number or higher percentage of reading questions in HOTS in reverse with series number of ACTION., but in consistent with learners' CEFR level. It means there are greater percentages of reading questions classified into LOTS in lower series number of ACTION, and there are greater %ages of reading questions classified into HOTS in higher series number of ACTION than lower series number of ACTION. Percentage of reading questions in HOTS increases in consistent with greater series of ACTION. However, overall percentage of reading questions in LOTS is always much greater than overall percentage of reading question in HOTS in every series number of ACTION. This finding was consistent with the studies conducted these researchers. (Al Raqqad & Ismail; 2018; Yuliana & Tungka, 2018; Tayyeh, 2021; Ulum, 2022; Laila & Fitriyah, 2022) Yuliana & Tungka (2018) commented that almost all textbooks provided insufficient reading questions in the category of HOTS and remarked that textbooks published by private companies supplied greater percentage of reading questions in HOTS than textbooks published by government agency. Laila & Fitriyah (2022) advised that incorporating higher-order thinking skills in the reading questions would improve students' critical thinking skills and promote deeper learning. Mizbani et al. (2022) suggested that there were demands for supplying assignments to engage the learners at higher levels of thinking orders; namely, analyzing, evaluating, and creating knowledge. Irawan & Diptoadi (2022) suggested increasing percentage of supplementary HOTS reading questions to adjust proportion between LOTS and HOTS reading questions to the proportion of 65.1% for LOTS reading questions and 34.9% for HOTS reading questions to enhance students' critical thinking ability.

5.3 Pedagogical Implications

The followings are suggestions for using these three textbooks for efficient promotion of critical thinking. Teachers have to supply additional reading questions, assignments, and activities to engage the learners at higher levels of thinking orders; namely, analyzing, evaluating, and creating knowledge (Mizbani et al., 2022). The research conducted by Irawan & Diptoadi (2022) proved that increasing percentage of supplementary HOTS reading questions to the proportion between LOTS and HOTS at 65.1%:34.9% enhanced students' critical thinking ability.

According to the research results, *Action 1, 2*, and *3* are all dominated by LOTS reading questions. Even though the percentage of HOTS reading question keeps increasing from Action 1 to Action 2, the ratio of LOTS reading questions and HOTS reading questions in ACTION 2 is 224:102 or 68.71%:31.29% which is lower than the ratio in the research results conducted by Irawan & Diptoadi (2022). Only Action 3 has the ratio of LOTS reading questions and HOTS reading questions that meet the research results conducted by Irawan & Diptoadi (2022). This fact implies that teachers who use *Action 1, 2*, and *3* for promoting students' critical thinking have to (1) add more reading tasks including activities together with more reading questions in HOTS or/ and (2) find supplementary texts of equivalent CEFR level that have balanced ratio between LOTS reading questions and HOTS reading questions as indicated by Irawan & Diptoadi (2022) in their research. There were some evidences of applying tasks and activities for successful promotion of critical thinking through English courses in Thailand. Thadphoothon (2023) applied the PBL (Project Based Learning) strategy to engage adult students (taxi drivers) and computer-mediated collaborative learning to engage university students in Higher Order Thinking Skills (HOTS). Wongudomsin (2018), at Sakon Nakhon Rajabhat University, incorporated a debate and discussion method to promote university students' critical thinking in English class of third year English major students. The research results indicated that participants' critical thinking ability increased significantly. Though these studies were based on the research conducted with adult students, the learning methods used in the research could be applied to both lower and upper secondary school students.

5.4 Limitations of the Study and Recommendations for Future Research

Textbook analysis on the basis of Revised Bloom's Taxonomy that the researcher conducted in this study was based solely on the analysis of the contents of ACTION 1, 2, and 3 without any particular reference to the actual use of ACTION 1, 2, and 3 by way of interview with other teachers who have used ACTION 1 with students in grade 7 and ACTION 3 in grade 9 nor observation or survey of how these teachers actually use these three textbooks in actual classrooms, nor survey on students' perception/ appreciation of these three textbooks.

This study concentrated on the analysis reading questions and the results of the study that the researcher discovered were consistent with the results of the study that other researchers discovered in international context and in Thailand context. The fact was that ACTION 1, 2, and 3 supplied not only reading questions but also activities, group work, project assignment, and role play to challenge students' critical thinking on the basis of reading passage, however these activities, group work, project assignment, and role play without reading questions were not counted for analysis. Moreover, the researcher observed that the textbook authors had a tendency to challenge students' creativity by means of assigning projects for group work rather than posing reading questions. These project assignments without W/H questions were not counted for analysis. There has never been any discussion among the three teachers that use one of the three series of ACTION to teach English core course for student in lower secondary level at The Holy Infant Jesus Roi-Et School. Each teacher uses the same textbook independently without experience sharing. The researcher approached ACTIONs on the basis of Revised Bloom's Taxonomy individually without academic contribution from other teachers in the same school who shared same professional expertise.

5.5 Conclusion

The analysis of reading question in ACTION 1, 2, and 3 found that among 998 reading questions in ACTION 1, 2, and 3, there were greater percentage of reading questions in the lower level than reading questions than reading questions in the higher level of Revised Bloom's Taxonomy; and lower percentage reading questions

in HOTS than in LOTS. ACTION 1, 2, and 3 covered all the six levels of Revised Bloom's Taxonomy and the categories of LOTS and HOTS with the percentage of reading questions in the level of remembering that dominated ACTION 1 kept decreasing in ACTION 2, and 3 and the percentage of understanding, applying, analyzing, evaluating, and creating keeping increasing in ACTION 2, and 3, however the percentage of HOTS reading questions in ACTION are not sufficient for promoting students' critical thinking. Therefore, ACTION 1, 2, and 3 was a series of textbook contained insufficient reading questions for enhancing students' critical thinking. If teachers want to use Action for promoting students' critical thinking, teachers have to supply additional HOTS reading questions, assignment, and activities or/and supply supplementary textbook that have balanced ratio of LOTS and HOTS reading questions.

5.6 Chapter Summary

In the first section of chapter V, the researcher presented the findings based on the analysis of reading questions in ACTION 1, 2, and 3. In the analysis the researcher found that reading question in ACTION 1, 2, and 3 cover all the six levels and the two categories of LOTS and HOTS with a balance that match students' level of English proficiency, but contains insufficient reading questions for promoting students' critical thinking ability. In the second section, the research presented pedagogical implications of the findings. In the third section, the researcher presented limitations of the study and recommendations for future research. In the fourth section, a conclusion of the study is provided followed by the chapter summary.

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