

**REPUBLIC OF TURKEY
ÇUKUROVA UNIVERSITY
THE INSTITUTE OF SOCIAL SCIENCES
DEPARTMENT OF ENGLISH LANGUAGE TEACHING**

**AN EXAMINATION OF THE REVISED BLOOM'S TAXONOMY IN
GLOBALLY AND LOCALLY WRITTEN EFL TEXTBOOKS**

Hüseyin KOCAİSPİR

MASTER OF ARTS

ADANA / 2023

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ÖZET

YENİLENMİŞ BLOOM TAKSONOMİSİNİN KÜRESEL VE YEREL OLARAK YAZILMIŞ İNGİLİZCE DERS KİTAPLARINDA İNCELENMESİ

Hüseyin KOCAİSPİR

Yüksek Lisans Tezi, İngiliz Dili Eğitimi Ana Bilim Dalı

Danışman: Prof. Dr. Hasan BEDİR

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Bu araştırmanın amacı, Adana, Türkiye'deki kamu ve özel okullarda kullanılan küresel ve yerel olarak yazılmış İngilizce ders kitaplarında yer alan soru ve yönerge türlerini incelemektir. Bu bağlamda soru ve yönergelerin, Bloom Taksonomisinin gözden geçirilmiş versiyonunda vurgulanan alt ve üst düzey bilişsel becerileri ne ölçüde kullandığını belirlemek çalışmanın temel amacıdır. Bu çalışmada, temel bilişsel yetenekleri ortaya çıkarmayı ve anlamayı amaçlayan nitel araştırma yöntemi kullanılmıştır. Araştırma bulguları, her iki tür ders kitabının da, Yenilenmiş Bloom Taksonomisinde belirtilen alt düzey bilişsel becerileri kapsadığını, ancak üst düzey bilişsel becerileri içermediğini göstermektedir. Mevcut çalışma, İngilizce ders kitabı yazarları, İngilizce öğretmenleri, yetkililer ve politika yapıcılar için ilişkili sonuçlar sunmaktadır. Çalışmanın sonuçları, İngilizce öğretmenlerinin Yenilenmiş Bloom Taksonomisini tanımaları ve sınıflarında kullandıkları ders kitaplarını ve diğer öğrenme materyallerini Yenilenmiş Bloom Taksonomisi ile uyumlu hale getirmeleri açısından son derece önemli olacaktır. Çalışma ayrıca Yenilenmiş Bloom Taksonomisi tarafından vurgulanan alt ve üst düzey bilişsel yetenekler çerçevesinde İngilizce öğretmenlerinin kendilerini geliştirmeleri için ek kaynak sağlama konusunda da önem teşkil etmektedir.

Anahtar kelimeler: Bilişsel beceriler, taksonomi, gözden geçirilmiş Bloom Taksonomisi, eleştirel düşünme, ders kitapları, İngilizce ders kitapları

ABSTRACT**AN EXAMINATION OF THE REVISED BLOOM'S TAXONOMY IN
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The purpose of this study is to investigate the types of questions and instructions found in global and local English textbooks used in public and private institutions in Adana, Turkey. In this context, the primary purpose of the study is to determine the extent to which these questions and instructions employ the lower- and higher-order cognitive skills highlighted in the revised version of Bloom's Taxonomy. The study employed a qualitative research method, aiming to uncover and comprehend the fundamental cognitive abilities. The research findings indicate that both types of textbooks cover lower-level cognitive skills as outlined in the Revised Bloom's Taxonomy, but do not encompass higher-level cognitive skills. This study has implications for authors of English textbooks, English instructors, government officials, and policymakers. The findings emphasize the need for English instructors to become familiar with the Revised Bloom's Taxonomy and align their textbooks and other learning materials accordingly. In addition, the study contributes to the development of English instructors by providing supplementary resources based on the cognitive abilities highlighted by the Revised Bloom's Taxonomy.

Keywords: Cognitive skills, taxonomy, Revised Bloom's Taxonomy, critical thinking, textbooks, EFL textbooks

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TABLE OF CONTENTS

	Page
ÖZET	iv
ABSTRACT.....	v
ACKNOWLEDGEMENTS	vi
LIST OF TABLES	ix

CHAPTER I INTRODUCTION

1. Introduction.....	1
1.1. Background of the Study.....	4
1.2. Problem Statement	6
1.3. Aim of the Study	8
1.4. Significance of the Study	9
1.5. Limitations	10

CHAPTER II REVIEW OF LITERATURE

2. Introduction.....	12
2.1. Taxonomies	13
2.2. Emergence of Bloom's Taxonomy	18
2.3. Revised Bloom's Taxonomy.....	20
2.4. Textbooks.....	28
2.5. EFL Textbooks.....	30
2.6. EFL Textbook Evaluation	31

CHAPTER III METHODOLOGY

3.1. Research Design	33
3.2. Data Collection	34
3.2.1. The Material.....	35

3.2.1.1. Locally Written EFL Textbook	35
3.2.1.2. Globally Written EFL Textbook	36
3.2.2. Document Analysis.....	37
3.3. Data Analysis.....	39
3.3.1. Data Analysis Process.....	39
3.3.2. Content Analysis.....	40
3.4. Validity and Reliability.....	41

CHAPTER IV

FINDINGS AND RESULTS

4. Findings and Results.....	43
4.1. The findings and Results of the Globally Written EFL textbook	43
4.2. The findings and Results of the Locally Written EFL textbook	47

CHAPTER V

DISCUSSION

5. Discussion.....	53
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CHAPTER VI

CONCLUSION

6. Conclusion	63
6.1. Recommendations.....	65
6.2. Implications.....	66
6.2.1. Curriculum Design.....	66
6.2.2. Teacher Training	68
6.2.3. Assessment Practices	71
6.2.4. Resource Development	72
6.2.5. Pedagogical Approaches	74

REFERENCES.....	76
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LIST OF TABLES

	Page
Table 1. Frequencies and Percentages of the Cognitive Steps in the Units	43
Table 2. Frequencies and Percentages of the Six Levels of Cognitive Domains.....	46
Table 3. Frequencies and Percentages of the Low and High Order Cognitive Domains.....	47
Table 4. Frequencies and Percentages of the Cognitive Steps in the Units	48
Table 5. Frequencies and Percentages of the Six Levels of Cognitive Domains.....	51
Table 6. Frequencies and Percentages of the Low and High Order Cognitive Domains.....	52



CHAPTER I

INTRODUCTION

1. Introduction

Several cognitive scientists and assessment specialists revised Benjamin Bloom's Original Taxonomy in order to create a cognitive classification for learning, teaching, and evaluating (Wilson, 2016). The relatively passive depiction of educational objectives in early taxonomies has evolved into a more proactive and prospective classification framework (Forehand, 2010). The updated taxonomy gave Benjamin Bloom's remarks and evaluations of his own taxonomy significant weight (Forehand, 2005).

The most significant changes to the updated taxonomy were made to the cognitive domain, which is the only one in which nouns were changed directly into verbs (Darwazeh & Branch, 2015). The "creating" cognitive step is now the topmost cognitive step according to the revised taxonomy, while the "evaluating" cognitive step is the next-highest level. In addition, the synthesis phase of the pyramid has been eliminated (Doughty, 2006). The "creation level" has replaced the "evaluation level" in Bloom's Revised Taxonomy (Cochran & Conklin, 2007), a classification scheme for various categories of content. On the other hand, it appears that fundamental aspects of instruction and learning are garnering significantly more attention. Bloom's Taxonomy is an alternative list of cognitive abilities that, like this one, can be utilised in a variety of ways by both students and instructors (Bloom et al., 1956). Bloom's Taxonomy is without a doubt one of the learning theories with the broadest consensus in educational institutions (Sivaraman & Krishna, 2015).

Teachers typically use Bloom's Taxonomy to construct learning objectives that emphasise both the subject matter and the level of knowledge that students must attain, as well as to develop assessments that accurately reflect students' growth throughout instruction (Booker, 2007). Development of fundamental skills is the first step in the educational process and is essential to the productive operation of the pedagogical mechanism (Pickard, 2007). Learners progress through each level of the taxonomy, commencing with the most fundamental knowledge acquisition and progressing to the most complex (Ulm, 2022).

Bloom's Taxonomy is utilised to evaluate students, construct and improve classes, determine the level of difficulty of assignments, and develop curriculum (Spence, 2019).

Cognitive knowledge, emotional skills, and psychomotor skills acquired during this initial stage are required for the successful application of the advanced educational goals component (Adams, 2015). The psychomotor skills are one of the three learning categories included in the updated taxonomy. (Wineburg & Schneider, 2010) The cognitive domain's research and development efforts prioritise knowledge and the development of the mental capabilities that comprise the cognitive sphere. A learner is able to identify the necessary axioms, contexts, and concepts for absolute learning in the cognitive domain (Begam & Tholappan, 2018).

The original taxonomy comprised six levels: knowledge; comprehension; application; analysis; and synthesis. The six cognitive domain processes that comprise the updated taxonomy are remembering, understanding, applying, analysing, evaluating, and creating. Theoretically, each of these cognitive domain phases is distinct from the others (Adams, 2015). Some verbs are appropriate for each cognitive stage, while others are not; however, there are verbs that are appropriate for more than one cognitive stage (Bümen, 2007).

A student may be able to recall the names of historical figures or chemical elements, but this does not imply that they can evaluate the significance of these figures or describe how chemicals interact (Darwazeh & Branch, 2015). To remember, or perceive relevant information, access to long-term memory is required; this is the focus of the remembering phase. Referring to, describing, identifying, labelling, matching, naming, referencing, reporting, reproducing, remembering, exhibiting, stating, and tabulating are some examples of appropriate verbs for the correct learning outcome in the remembering step. These verbs are used during the step of recalling.

The term understanding can also refer to the ability to comprehend, such as the ability to contrast and compare the conventions of two civilizations. The verbs arrange, abstract, articulate, relate, categorise, compare, contrast, conclude, differentiate, debate, estimate, illustrate, discriminate, generalise, demonstrate, predict, reorder, reiterate, restate, and transform can help you remember step-by-step instructions.

The applying stage necessitates the implementation of previously acquired knowledge or skills in a variety of contexts. For example, the Archimedes Principle can be used to provide an answer to a related query (Koksal & Ulum, 2018). Verbs such as "conduct," "apply," "experiment," "implement," "examine," "manipulate," "outline," and "transfer" are examples of action verbs that can be used to achieve the desired learning outcome of "remembering step."

In addition, the analysis step needs that the information be segmented in order to determine the relationships that exist between the segments. For instance, one may investigate the connections that exist between the various characters in a movie. Verbs such as "deconstruct," "classify," "relate," "contrast," "compare," "detect," "discriminate," "divide," "identify," "arrange," and "separate" are essential to obtaining the intended learning outcome in the remembering step of the learning process (Adams, 2015).

In addition, the decision-making process throughout the evaluation phase must adhere to a set of predetermined criteria (Blooms et al., 1956). At this level of cognition, it is possible to evaluate the quality of a product using criteria that are exclusive to a specialty. Verbs such as argue, compare, evaluate, conclude, contrast, consider, criticize, determine, evaluate, judge, measure, review, and validate are some examples of words that will help you memorize step vocabulary correctly (Bümen, 2007).

Creating, the final phase, ensures that the components that were combined to form a new whole are kept together. In other words, it is the rearrangement of the molecules that results in the formation of a new structure. At this point in the process of cognition, one is capable of producing original work. Building, compiling, constituting, constructing, developing, formulating, hypothesizing, inventing, planning, producing, reconstructing, revising, and synthesizing are just a few examples of verbs that can be used to help you remember a crucial phase (Darwazeh & Branch, 2015).

The affective domain of the taxonomy is responsible for describing how students feel about the content that they have learned. It has merit because of the variety of viewpoints they bring to it and the motivations they have for being interested in the subject. In addition, it is simple to evaluate the learners' states or characteristics when they participate in discussions, listen to others, and communicate in order to determine whether or not they demonstrate consistent attitudes, respectful behavior, and genuine insights. This can be done in order to ascertain whether or not the learners demonstrate these qualities (Forehand, 2005).

In addition, the psychomotor domain wasn't part of the initial taxonomy, so it had to be added later on. The original taxonomy did not include psychomotor abilities. In the psychomotor domain, students work to improve their physical abilities and their motor skills. These skills comprise more complicated abilities such as driving a car as well as more straightforward manual talents such as cleaning the house. These abilities are able to be judged according to characteristics including speed, technique, and others (Köksal

& Ulum, 2018). With all these in mind, the present study inquires the extent of the Revised Bloom's Taxonomy in the globally and locally authored EFL textbooks.

1.1. Background of the Study

In spite of the fact that it was developed in the 1950s, Bloom's taxonomy is still just as essential today as it was then, if not more so. It has a wide range of applications in educational contexts, ranging from primary to graduate levels (Pickard, 2007). Educational authorities are able to attain their learning goals and build a strategy to achieve them by using Bloom's taxonomy. Educators are also responsible for accurately defining learning objectives, constructing lesson plans that reflect those objectives, and guiding learners according to the taxonomy's levels. They are also able to build useful assessment tools, activities, methods, and tactics for assessment exercises. The taxonomy serves not only as a bridge between the students' current levels and the levels they wish to achieve but also as a guide to inform students about the relevant gap between the two (Sivaraman & Krishna, 2015).

The acquisition of new subject-related knowledge, skills, and perspectives is one of the key goals of the taxonomy, and one of the primary aims of the taxonomy is to assure that every student has accomplished this goal (Ulum, 2022). In addition, by making use of taxonomies, educators are afforded the opportunity to conduct efficient evaluations of the learning outcomes as the course moves through each stage of the model (Wilson, 2016). This way, educators can provide helpful feedback and tailor instruction to fit the individual needs of each student, creating a learning environment that allows for more effective engagement and understanding. Ultimately, the taxonomy serves as a critical tool for students and teachers alike. Through the use of taxonomies, educators can better understand what students have acquired during a course and make use of evidence-based practices to guide instruction (Begam & Tholappan, 2018).

Furthermore, taxonomies can provide an indication of what knowledge and skills students need to acquire in order to progress through the course. By having a clear understanding of student knowledge and skills, educators are better equipped to design lesson plans and activities that best engage students and help them achieve the desired outcomes. Taxonomies can also be used to measure student performance and growth over time, allowing educators to track student progress and identify areas where additional instruction may be needed (Booker, 2007). Taxonomies are therefore a valuable tool for

educators and can be used to ensure that all students receive an appropriate level of instruction, guidance, and support. Furthermore, taxonomies can provide an indication of what knowledge and skills students need to acquire in order to progress through the course. By having a clear understanding of student knowledge and skills through taxonomies, educators can design lessons and activities that are tailored to meet the needs of all students in their classroom (Cochran & Conklin, 2007).

Taxonomies can also be used to inform teaching strategies, allowing educators to create lessons and activities that will provide appropriate support for each student's learning level. By helping educators to differentiate instruction and assess students, taxonomies can play a crucial role in ensuring that all students receive the quality education they deserve. Taxonomies can also be used to measure and assess student progress throughout the course (Doughty, 2006). By tracking student progress throughout the course, educators can measure a student's growth and determine whether or not they are meeting the learning objectives set for them. Through these measurements, educators can better identify when a student is struggling and adjust their teaching strategies or provide additional support to help them reach the expected learning goals. With the help of taxonomies, educators can also recognize when a student is excelling in the course material and provide them with additional challenges to help them reach their full potential (Forehand, 2010).

With the ability to accurately measure student progress, educators can have a better understanding of how students are doing and what they need to do to improve. By using taxonomies to measure and assess student progress throughout the course, educators are better equipped to understand what each student needs in order to reach the learning goals that have been set for them. This allows educators to effectively personalize the learning process for each student, providing the necessary guidance and support for them to excel in their course work and become more successful learners (Krathwohl, 2002). This allows educators to not only provide the appropriate level of support for those who are struggling, but also the additional challenge and guidance needed for those who are excelling. Ultimately, by implementing taxonomies into their teaching methods, educators are able to ensure that all of their students are being accurately assessed and provided with the necessary support and guidance needed for them to reach their full potential. As such, taxonomies are an essential tool for educators, helping them effectively assess their students and provide the necessary guidance and support for them to reach their learning goals (Pintrich, 2002).

As a result, taxonomies are an invaluable asset for educators to ensure that each student is being properly and accurately assessed and provided with the necessary support in order for them to be successful in their learning. Taxonomies are powerful tools for educators to use in order to accurately assess their students and provide them with the right level of support and guidance. Taxonomies are beneficial for both the educators and the students, providing them with a systematic approach to assess each student's understanding of the material and ensure that they are receiving the support needed to reach their learning goals (Spence, 2019).

1.2. Problem Statement

The phenomenon known as education is comprised of a large number of components spanning numerous domains, each of which possesses a unique set of characteristics that influence the quality of education and the degree to which its objective is achieved. This could include instructors, students, instructional resources, educational environments, or anything similar. When all of these factors are brought into conformity with the concepts that underlie a society's education system, both the quality and level of education improve (Brighouse, 2006). The instructional resources that are utilised throughout the education process are correspondingly significant because they are the most frequently and extensively utilised educational instruments (Dale, 1966).

Effective education is characterised by its capacity to equip students with the cognitive, affective, and psychomotor skills necessary to face the challenges they may face in their lives. If it is expected that the student will be equipped with cognitive, emotional, and psychomotor traits that will help him/her deal with life's challenges, then it is not reasonable to assume that these characteristics will emerge as a result of a random educational process (Ferris & Aziz, 2005). For this reason, it is essential to implement a specific strategy and programme to ensure that students will ultimately be able to solve problems independently. Consequently, a number of studies were conducted to determine the extent to which course materials, such as textbooks and evaluation tools, incorporate both higher and lower order cognitive skills, as enumerated in the revised version of Bloom's Taxonomy (Krathwohl, 2002).

The Revised Bloom's Taxonomy suggests that specific textbooks and test queries at various levels of education may not adequately address the higher order cognitive domain. Due to the fact that productive and receptive skills, as well as critical and

reflective thinking skills, can be sufficiently gained and empowered by learners through attaining high-order cognitive skills, failure in academic success can be attributed to a lack of attention to the Revised Bloom's Taxonomy (Gul, Kanwal, & Khan, 2020). In addition, postmethod approaches provided critical perspectives that bolstered the investigated phenomenon. Because students can only store information in their short-term memories when textbooks emphasise lower-order cognitive skills such as remembering, the resulting learning is superficial. Numerous textbooks, whether written on a global or local scale, appear to lack the higher-order cognitive domain defined in the updated taxonomy (Rahayu, 2018).

Textbooks, and EFL textbooks in particular, should integrate both levels of the revised Bloom's taxonomy in order to facilitate meaningful learning. English-as-a-foreign-language learners may have limited opportunities to develop abstract thinking skills; they only develop concrete thinking skills. In other words, a significant portion of EFL textbooks may not explicitly address higher cognitive levels that foster critical, reflective, and abstract thinking skills (Ulum, 2021). Therefore, learning English is not stable but rather unstable when higher order thinking skills are absent from EFL textbooks and other course materials (Mizbani & Chalak, 2017). Because higher-order cognitive skills are inextricably linked to meaningful learning, the turbulent structure of English as a Foreign Language (EFL) cannot continue without their incorporation. In light of this, English as a Foreign Language textbooks should include critical and reflective sections to enhance students' ability to think abstractly (Olimat, 2015).

Similarly, the incorporation of the Revised Bloom's Taxonomy in EFL textbooks is a vote of confidence in the analytical abilities of language learners (Assaly & Igbaria, 2014). When learning English as a foreign language textbooks demand higher cognitive abilities, they require students to cultivate their own higher cognition. Teachers at all educational levels typically lack the opportunity and time to construct their own instructional materials. As a result, they rely on textbooks, and are in fact totally dependent on them. In educational contexts, a textbook is comparable to a dialysis patient's dialysis apparatus. Therefore, EFL textbooks must include both the higher and lower order cognitive domains proposed by the Revised Bloom's Taxonomy. Textbooks are an integral part of EFL instruction.

Alnofal (2018) suggests that the taxonomic way of thinking should be adequately incorporated into EFL textbooks in order to cultivate students' ability to analyse or evaluate information. If one of the desired outcomes of studying English as a foreign

language is to develop students' capacity for abstract thought, it is abundantly clear that the new taxonomy should be included in the relevant textbooks. Therefore, the incorporation of instructional material in EFL curricula that predominantly emphasises the use of short-term memory is detrimental to the development of higher cognitive states in younger learners (Qasrawi & BeniAbdelrahman, 2020). In light of these factors, the purpose of this study is to determine whether globally and locally written EFL textbooks adequately address the higher and lower order cognitive skills suggested by the Revised Bloom's Taxonomy.

1.3. Aim of the Study

This paper investigates the extent to which the higher and lower order cognitive domains of the Revised Bloom's Taxonomy are present in globally and locally produced EFL textbooks. In addition, the investigation serves to clarify the weaknesses or strengths of the reviewed textbooks. Consequently, the following research questions were developed:

1. What lower-order cognitive skills are incorporated in the locally published EFL Textbook used for 10th graders in terms of the Revised Bloom's Taxonomy?
2. What higher order cognitive skills are incorporated in the locally published EFL Textbook used for 10th graders in terms of the Revised Bloom's Taxonomy?
3. What lower order cognitive skills are incorporated in the globally published EFL Textbook used for 10th graders in terms of the Revised Bloom's Taxonomy?
4. What higher-order cognitive skills are incorporated in the globally published EFL Textbook used for 10th graders in terms of the Revised Bloom's Taxonomy?
5. How do locally published and globally published EFL textbooks for 10th graders differ in how much they include lower and higher-level thinking skills according to the Revised Bloom's Taxonomy?

1.4. Significance of the Study

Education is a dynamic process that is subject to revision based on societal needs, technological developments, scientific findings, global changes, etc. In fact, the majority of advancements in various fields are the result of education. All nations that have advanced in the fields of technology, science, the arts, etc. have also made strides in education. In order to develop, it is essential for a nation to accord education the importance it deserves.

In order to advance society, the desired outcomes of educational programs must be innovative, original, and of a high caliber. It is not sufficient to produce only individuals who can read and write, perform elementary arithmetic, paint, and play basketball. Individuals who have only acquired basic skills through traditional education and simple educational programs are unable to do more than read a book written by someone else, solve a pre-existing problem, copy a picture, etc. Individuals who have acquired not only basic skills but also higher-level cognitive skills (such as analysing, evaluating, and creating) through a modern educational philosophy and updated educational programs can write books that others will read, create works of art, or find solutions to unsolved problems, thereby contributing to the development of their societies and advancing their nations.

Consequently, it is necessary to thoroughly evaluate the factors that influence the structure of educational programs and the degree to which the quality and purpose of education are achieved. There are educational tools among these factors. In terms of assessing the student's development and measuring higher-level cognitive skills, the measurement and evaluation function of educational tools is crucial. In this regard, it is essential to evaluate the most popular educational resources, such as textbooks. As long as they reflect the curriculum and the principles of educational philosophy and developmental psychology, textbooks can be effective measuring and evaluation instruments.

Assessment and evaluation are an integral part of the learning and teaching process and one of the most important tools for structuring educational programs. It is important to determine if the activities contained in textbooks, one of the most common and widely used educational tools, neglect the principle of acquiring not only basic skills but also higher-level cognitive skills, and if they are consistent with the characteristics of the student's development. This research intends to educate stakeholders by examining

activities from this vantage point. It is anticipated that the research's outcomes will be advantageous to the field.

This study examines the questions and instructions found in locally and internationally published EFL textbooks that are used in state or private high schools in Adana, Türkiye. The purpose of this investigation is to determine the extent to which the overall questions and instructions incorporate the lower and higher order cognitive skills that are highlighted in the Revised Bloom's Taxonomy. In addition, the present research offers related consequences for advanced EFL textbook authors, EFL teachers, authorities, and policy makers. The findings of the study will be of major relevance to authors of EFL textbooks in their efforts to build EFL textbooks that are correctly taxonomized. The findings of the research will also make it critically important for instructors of English as a Foreign Language to be familiar with the Revised Bloom's Taxonomy and to adapt the textbooks and other learning materials they use in their classes accordingly. In addition, the findings will be of considerable value for teachers of English as a foreign language (EFL) who wish to become proficient in the production of additional resources to textbooks that are based on the lower and higher order cognitive skills proposed by the Revised Bloom's Taxonomy. In conclusion, the findings of the study will be of critical significance to authorities and policy makers when it comes to the formulation and representation of policies linked to the topic. The findings of the current study will, in addition, contribute to the dissemination of knowledge on the Revised Bloom's Taxonomy. The current research will also shed light on how to review and evaluate EFL textbooks released by local and global corporations as well as illuminating the stakeholders to select textbooks that are in accordance with the curriculum goals.

1.5. Limitations

EFL textbooks had better involve questions, instructions, and activities of diverse abstract thinking skills as well so that students grasp the mastery of carrying out related tasks at every cognitive step. Therefore, EFL textbooks ought to incorporate particular cognitive skills asserted by the Revised Bloom's Taxonomy so as to promote learner performance. By the present research, the Revised Bloom's Taxonomy was benefited to evaluate the related EFL textbooks. However, the study is limited only to:

- 1) Two books (one local EFL textbook and one global EFL textbook as instruments,

- 2) Student textbooks but not the related ancillaries,
- 3) The Revised Bloom's Taxonomy as the theoretical framework of the study among several related taxonomies,
- 4) Particular levels of EFL textbooks but not all levels.



CHAPTER II

REVIEW OF LITERATURE

2. Introduction

This section delves into various related topics concerning the use of the Revised Bloom's Taxonomy in textbooks, particularly English as a Foreign Language (EFL) textbooks. It also explores the history of Bloom's Taxonomy and the revised version. To begin, the literature review delves into the concept of Bloom's Taxonomy, which is a well-known framework for categorizing cognitive skills. The history of Bloom's Taxonomy is examined, tracing its origins and development. It explores how the taxonomy has evolved over time to better address the complexities of learning and critical thinking. The revised version of Bloom's Taxonomy is a focal point of the literature review. This updated version addresses the limitations of the original taxonomy and provides a more comprehensive framework for assessing cognitive skills. Researchers have found it to be an essential tool in educational settings for promoting critical thinking and higher-order cognitive abilities among students. In the context of this study, the literature review particularly emphasizes the application of the Revised Bloom's Taxonomy in textbooks, with a specific focus on EFL textbooks. It investigates how the taxonomy has been incorporated into educational materials to promote meaningful learning experiences and foster critical thinking skills. This review provides insights into the various strategies and methods employed by textbook authors and publishers to align their materials with the revised taxonomy. The literature review section synthesizes the findings from various scholarly sources, including research articles, academic papers, textbooks, and educational reports. By examining existing literature on the use of the Revised Bloom's Taxonomy in textbooks, EFL textbooks, and its history, the study gains valuable insights and contextualizes its research within the broader academic discourse. Overall, the literature review plays a vital role in providing a solid foundation for the study by offering a comprehensive understanding of the use and impact of the Revised Bloom's Taxonomy in EFL textbooks. It allows the research to build upon existing knowledge, identify gaps in the literature, and contribute to the existing body of research on this important topic.

2.1. Taxonomies

Taxonomies provide an objective and systematic approach to assessment, enabling educators to effectively identify each student's level of understanding and determine the type of support needed. This helps to ensure that the students are being given the appropriate level of instruction and guidance to maximize their learning and provide them with the necessary tools to achieve success in their studies (Wineburg & Schneider, 2010). By using taxonomies, educators can ensure that they are able to provide the appropriate level of instruction and guidance for each student based on their individual needs. This approach is beneficial for both the educators and the students because it enables them to develop an understanding of each student's individual needs rather than relying on a "one size fits all" approach (Cullinane, 2009). This approach is beneficial to both the educators and the students because it helps to create a more effective learning environment by allowing each student to receive instruction that is tailored to their individual needs. This approach allows the educators to create an individualized learning plan for each student, which can help to ensure that they are receiving instruction that is tailored specifically to their individual needs and interests. As such, educators can be confident that they are providing each student with the best possible education by using taxonomies to determine their individual needs (Krathwohl, 2002).

In addition, this approach also helps to foster a sense of ownership and responsibility in the students. By providing students with the opportunity to develop their own personalized learning plans, they are able to take ownership of their education and become more actively engaged in the learning process (Iwuchukwu, 2015). This sense of responsibility and ownership encourages students to take an active interest in their academic success and allows educators to track the progress of each student so that they can make adjustments to their learning plans as needed. This is a great advantage for teachers, as it enables them to provide each student with a personalized education that takes into account their unique strengths and weaknesses. As a result, this type of personalized learning plan helps to promote an environment of accountability and responsibility among students (Hoque, 2016).

By creating an environment in which students can take ownership of their learning, they can be more proactive in the classroom and are less likely to fall behind or become discouraged. This encourages students to take a vested interest in their academic success and promotes an atmosphere of mutual accountability between teachers and

students. Furthermore, with personalized learning plans, teachers can be more aware of the individual challenges their students face and better equipped to help them succeed (Kadambaevna, 2020).

Furthermore, with personalized learning plans, teachers can better tailor their instruction to the individual needs of each student and be more aware of their particular learning styles. This can lead to an overall increase in student engagement, providing students with the opportunity to have a say in their educational journey and improving their long-term academic outcomes. By enabling teachers to be more aware of the individual needs of their students, personalized learning plans can foster an environment of accountability and collaboration between teachers and students (Bonaci, Mustata, & Ienciu, 2013).

With personalized learning plans, teachers can take a more active role in helping their students succeed by being better equipped to create individualized instructional plans tailored to each student's particular learning needs. Through these personalized plans, students can gain an understanding of their own learning strengths and weaknesses, allowing them to make more informed decisions about their academic path (Stayanchi, 2017). Ultimately, personalized learning plans can be an effective tool for empowering students to take ownership of their education and encouraging them to become more actively engaged in the learning process. By encouraging students to become active participants in their own learning, personalized learning plans can help them become more responsible for their own successes and failures while helping teachers better meet the needs of each individual student (Lee et al., 2017).

The new taxonomy distinguishes between "knowing what," which refers to the subject matter of thought, and "knowing how," which refers to the methods used to solve problems, in contrast to the original taxonomy from 1956. For educators, the inclusion of this distinction in the taxonomy is crucial because it emphasizes the fact that learning entails more than just understanding facts; it also entails applying knowledge to solve problems (O'Gorman, 2013). By utilizing more complex language, the updated version of Bloom's Taxonomy emphasizes the learning outcomes of students. The updated taxonomy is a modernized version of Bloom's taxonomy, which was created in 1956 to examine learners' cognitive capacities and behavior. The fundamental framework is credited to Benjamin Bloom. "Education must become increasingly concerned with the fullest development of all children and youth," according to Bloom. In order to recognize

higher order thinking abilities like evaluation and synthesis, Bloom's Taxonomy has been further developed (Anderson, 2005).

Bloom was interested in the growth of higher order thinking abilities and realized that education should go beyond a student's memorization of facts and instead emphasize cognitive skills that would allow them to think critically. He was a fervent supporter of constructivist theory and thought that it was important to motivate students to actively participate in their education by creating and assessing their own knowledge. Bloom was of the opinion that giving students the chance to practice higher order thinking techniques would enable them to make wise decisions and apply their knowledge in useful ways. An influential framework for categorizing and organizing cognitive objectives, Bloom's taxonomy emphasizes the value of honing higher order thinking abilities. He asserted that it was imperative to abandon the conventional model of rote memorization in favor of a strategy that put an emphasis on comprehension, analysis, evaluation, and creative thinking (Bloom et al., 1956).

According to Bloom, education should include the capacity for critical and creative thought in addition to knowledge acquisition and memorization. Bloom thought that by doing this, students would be better able to solve complex problems and participate more actively in their learning. Bloom's taxonomy outlined six levels: remembering, understanding, applying, analyzing, evaluating, and creating. This was done to make sure that students could achieve this level of critical and creative thinking (Adams, 2015). Bloom argued that by dividing learning objectives into these six categories, teachers would be better able to comprehend the learning goals of their students and create lessons that foster both critical and creative thinking. In the end, this educational strategy gives students a greater capacity to think critically and take an active role in their own learning (Anderson, 2005).

The six Bloom's taxonomy levels—remembering, understanding, applying, analyzing, and evaluating—represent a step-by-step progression for students to move from merely recalling information to ultimately producing something new. To ensure that students are challenged to advance from lower levels of thinking, such as memorization of facts or conceptual understanding, to higher levels of evaluation and creation, educators must carefully plan and design their lessons in light of this (Bonaci, Mustata, & Ienciu, 2013).

Teachers can create curriculum and assessments that encourage students to advance from basic memorization or understanding to higher levels of critical and

creative thinking by recognizing these tiers and understanding the learning process. Students have the chance to learn more about the subject matter, connect ideas in more profound ways, and hone higher-level thinking abilities through such a process. As a result, educators ought to use the Blooms taxonomy as a model for evaluating student learning and, in doing so, give students worthwhile opportunities to learn and advance their knowledge (Cochran & Conklin, 2007).

Teachers can make sure that students are given worthwhile opportunities to develop higher order thinking skills and achieve a greater level of content mastery by incorporating Bloom's Taxonomy into their curriculum and assessment design. Because of this, Bloom's Taxonomy is a crucial tool for educators who want to design effective and interesting learning experiences for their students. Bloom's Taxonomy has proven to be an invaluable tool for educators, giving them a clear framework for developing effective and engaging learning experiences. It places a strong emphasis on student understanding and growth. With the help of this framework, students can interact with the material and critically evaluate what they have learned, which helps them develop a thorough understanding of the subject (ElJishi & Abdel, 2022). Because of this, Bloom's Taxonomy is a crucial tool for educators who want to design effective and interesting learning experiences for their students. Bloom's Taxonomy gives teachers a valuable tool for organizing learning experiences and ensuring that students get the most out of their education because of its emphasis on the growth of student understanding. Bloom's Taxonomy gives teachers a powerful tool to design engaging learning experiences by emphasizing the growth of student understanding rather than just memorization of facts (Ozola, 2014).

The emphasis on cognitive (knowing) and affective (emotional) learning areas that make up educational objectives is referred to as revised Bloom's taxonomy (attitude). By focusing on both the cognitive and affective realms of learning, teachers can develop activities that help students gain a comprehensive understanding of a subject, rather than just being able to recite facts (Zhao, Muhamad, & Mustakim, 2022). Additionally, by giving teachers a way to measure student progress in the cognitive and affective realms of learning, Blooms Taxonomy allows educators to track students' development and identify areas where they may be lagging or need more support. Ultimately, Blooms Taxonomy provides a powerful tool for teachers to design learning experiences that will truly engage students in the process of gaining a comprehensive understanding of a subject. It also allows teachers to assess their own teaching techniques and adjust them if

necessary in order to ensure that students are getting the most out of their instruction (Choudhary & Raikwal, 2014).

By providing a way to measure student progress, Blooms Taxonomy allows teachers to track their own effectiveness in the classroom and make sure that students are able to truly comprehend the material they are learning. This not only enables teachers to evaluate their students more effectively, but also allows them to better understand the best teaching strategies and methods they should employ in order to ensure that their students are achieving a thorough understanding of the material (Baktybayev & Tussubayeva, 2020). Blooms Taxonomy is therefore a valuable tool for teachers, helping them to improve their teaching and evaluation skills, as well as ensuring that their students are engaged and able to gain a deep understanding of the material. Through the use of Blooms Taxonomy, teachers are able to identify and track student progress in a meaningful way. By understanding and monitoring the progress of their students in this way, teachers can improve their overall teaching effectiveness and ensure that their students are reaching the desired level of comprehension for the material being taught. This tool not only provides a framework for teachers to use in order to assess their students' knowledge, but it also provides insight into which teaching strategies and methods are most effective in helping students develop a deep understanding of the material (Senthilkumar & Kumar, 2017).

By using the various levels of Blooms Taxonomy to plan, evaluate, and monitor their lessons, teachers are able to provide a more meaningful and engaging learning experience for their students. Teachers are thus able to use the levels of Blooms Taxonomy as a tool to tailor their teaching style to better match the needs of their students, making sure that each student is being provided with an adequate level of instruction. Ultimately, the use of Blooms Taxonomy in teaching is an invaluable tool for teachers to ensure that their students are receiving a comprehensive education. As a result, teachers are able to make use of the different levels of Blooms Taxonomy to structure and measure student learning (Surjosuseno & Watts, 1999). By focusing on objectives such as knowledge, comprehension, application, analysis, synthesis, and evaluation when planning their lessons, teachers can help foster a greater sense of understanding and mastery in their students (Zareian et al., 2015). By doing so, teachers are able to create an environment that helps students develop higher-level thinking skills, critical and creative problem solving abilities, and improved communication and collaboration skills. Additionally, the use of Blooms Taxonomy allows teachers to have greater control over

their instruction and create a more cohesive learning experience for their students (Krathwohl, 2002).

Moreover, the use of Blooms Taxonomy can also provide students with a better understanding of how their learning fits into the bigger picture. With the implementation of Blooms Taxonomy, teachers can structure their lessons to meet their desired outcomes and ensure that all students are receiving an effective learning experience (Revati & Meera, 2017). By using Blooms Taxonomy in their instruction, teachers can ensure that the goals of their lessons are met, that students have a thorough understanding of the material, and that they are capable of higher-level thinking and critical analysis. Additionally, the use of Blooms Taxonomy allows students to reflect on their learning and have a deeper understanding of how their own knowledge fits into the wider context of their course (Pickard, 2007).

Furthermore, the use of Blooms Taxonomy can help teachers to assess their students' learning by looking at the way they think, how they analyze and evaluate information, and how they apply knowledge (Forehand, 2005). All of these benefits make the implementation of Blooms Taxonomy an invaluable asset in the classroom, as it enables teachers to tailor their instruction to meet their desired outcomes and ensure that all students are being provided with an effective learning experience. Through the use of Bloom's Taxonomy, teachers are able to provide their students with a comprehensive and effective learning experience (Wilson, 2016). Bloom's Taxonomy helps teachers differentiate instruction, allowing them to create an instructional plan that meets the unique needs of each student (Pickard, 2007).

2.2. Emergence of Bloom's Taxonomy

Bloom's Taxonomy was introduced in 1954 by Benjamin Bloom and his collaborators Max Englehart, Edward Furst, Walter Hill, and David Krathwohl in their book *Taxonomy of Educational Objectives* (Forehand, 2010). Bloom's taxonomy is a hierarchical classification of many types of thinking. The objective of employing taxonomy is to organize, from simple to complex within itself, what the individuals to be taught seek to learn. Since the introduction of taxonomy in 1956, many modifications and advancements have occurred in every subject (Huitt, 2011). Unavoidably, these developments and advancements would have an effect on the concept of "education." Educators today acknowledge that "teaching and learning" entails more than just thinking.

Bloom's Taxonomy was changed by a working group led by Anderson and Krathwohl to meet contemporary needs, for reasons such as inability to completely represent high-level cognitive knowledge, inability to reconcile some current concerns with the taxonomy, and challenges with the evaluation stage. The previous taxonomy was more useful during the review process, but the amended taxonomy emphasized uniformity and planning (Wilson, 2016).

The "synthesis" step was renamed "creation" and replaced with "assessment" in the new Bloom Taxonomy. The final phase, "creation," indicates the most sophisticated or difficult cognitive skill, or at least a form of cognitive tasks' pinnacle. In addition, cognitive process and knowledge are split into four categories: factual, conceptual, procedural, and metacognitive. In order for a training program to be deemed acceptable in the modern period, it is not sufficient for its content to be practical and easily transferable to the real world; it must also expand the participants' perspectives and boost their contribution to their work (Krathwohl & Anderson, 2010).

The size of learning increases as the training program's content becomes more extensive. It is essential to ensure this richness in terms of both content and methodology. For instance, in today's environment where mobile technologies are so prevalent, it is crucial to be able to provide mobile content to learners. Creating appropriate learning environments for individuals who are interested in reading, listening, or watching according to their interests is crucial (Darwazeh & Branch, 2015).

The latest Bloom Taxonomy is the most significant indicator of this. It clarifies that there must be an act of creation that transcends evaluation. The purpose of Bloom's Taxonomy is to assist instructors in determining the intellectual level of their students. Additionally, it permits students to ask more specific inquiries. In this way, it assists students who are attempting to reach the last three levels (analysis, synthesis, and evaluation) to enhance their critical thinking abilities (Forehand, 2005).

Thanks to Bloom's Taxonomy, demanding questions not only build a student's knowledge base, but also empower him or her to take charge of the learning process and feel in control of it. This can drive learners to make a decision and apply it to a concept. Essentially, Bloom's Taxonomy teaches students not just how to make judgments in the classroom, but also how to build the fundamental abilities required for daily living. Bloom's Taxonomy is a system that categorizes students' cognitive skills, from the most basic skill "remembering information" to the most challenging skill of knowledge reasoning, that is, "evaluation" (Anderson, 2005). The Bloom Taxonomy is a useful tool

that is frequently used by educators to develop lesson plans and assessments that promote critical thinking. According to Lee Watanabe-Crockett, teaching learners critical thinking skills effectively is always a struggle, and Bloom's Taxonomy is the most effective framework for learning (Krathwohl, 2002).

2.3. Revised Bloom's Taxonomy

An essential step in the process of writing textbooks is using Benjamin Bloom's taxonomy of learning objectives. Bloom's taxonomy is possibly the model of cognitive processes that is most frequently used. It is a system of classification that draws attention to actions ranging from the simpler cognitive level of remembering to the more difficult cognitive level of creating (Amer, 2006).

Thinking, knowing, remembering, judging, and problem-solving are all examples of cognitive processes. Meta-cognition, on the other hand, is the knowledge and comprehension of our own and other people's mental actions and capacities as well as the organization of these actions. The concept of taxonomy is primarily used in biology to categorize living things, but it is also applied in many other disciplines as a way to divide terms into groups and establish hierarchies of opinion (Anderson & Krathwohl, 2001).

In 1948, Benjamin Bloom oversaw and led a team of teachers who created a taxonomy for categorizing educational goals over the course of eight years. Cognitive, emotional, and psychomotor learning domains were added to Bloom's Taxonomy in 2003. There are six different levels of thought that make up the cognitive domain. Remembering, understanding, and applying make up the first three levels, or lower order skills, while analyzing, evaluating, and producing make up the last three levels, or higher order skills (Crossland, 2015). In other words, knowledge, comprehension, and application make up the three lower levels, while analysis, synthesis, and evaluation make up the three upper levels. Since taxonomy is hierarchical and each step is located at a higher level, lower levels are included in higher levels. For instance, a student functioning at the application level is also capable of working at the knowledge and understanding levels. Understanding what is being read requires a range of abilities that go far beyond word recognition and deciphering. Together with his assistants, Bloom created the taxonomy (Kidwell et al., 2013). The taxonomy created by Bloom and his assistants is widely used in education to classify learning objectives and outcomes. It provides a framework for educators to design instructional activities and assessments that target

specific levels of cognitive complexity. By understanding the different levels of the taxonomy, teachers can effectively scaffold their instruction to help students progress from lower-order thinking skills to higher-order thinking skills.

The thinking abilities are arranged in a tier system, with the higher levels covering all of the lower levels' cognitive abilities. The simple taxonomy identifies knowledge, understanding, application, analysis, synthesis, and evaluation as the six stages for determining whether or not students have met the objectives of their cognitive domains. Because of its many attributes, such as the following, Bloom's Taxonomy is the one that is most frequently used in the field of education (McDermott, 1988; McNeil, 2011).

1. The taxonomy has an educational focus and can be used to distinguish between groups of objectives used by teachers to create lesson plans, study curricula, and programs.
2. The levels are established in a clear and logical manner.
3. A descriptive breakdown of psychological phenomena is provided by the taxonomy.
4. The taxonomy examines various levels of thought, from the most fundamental to the most sophisticated, each level building on the groundwork laid by the level before it.
5. Every goal paves the way for the one that follows it, making it seamless.
6. It is comprehensive in that every behavioral goal can be categorized using the taxonomy, making it all-inclusive.

However because of the new perspective that modern society has adopted toward knowledge and the ways in which it can be accessed, it needed to be revised. The new Bloom's taxonomy rethinks the structure of the original taxonomy, which has been criticized for many years. It has become an essential tool for planning education programs and instruction as a result, where efforts are made to reflect contemporary trends (Nkhoma et al., 2017). The revised Bloom's taxonomy takes into account the shift towards more active and student-centered learning approaches. It emphasizes the importance of higher-order thinking skills such as critical thinking, problem-solving, and creativity in today's rapidly changing world.

The one dimension that was previously present has been replaced in the revised taxonomy by two new dimensions: the cognitive process dimension and the knowledge

dimension. One way that the field of curriculum development has advanced is by making education more two-dimensional and visual. The knowledge dimension's steps aid educators in deciding what lessons to teach their students. The four sub-levels that make up the knowledge dimension are conceptual knowledge, procedural knowledge, metacognitive knowledge, and factual information. "Factual knowledge" here refers to the knowledge a student must have in order to solve problems pertaining to a particular subject (Pappas, Pierrakos, & Nagel, 2013). On the other hand, conceptual knowledge is defined as the connections that allow the key components of a complex organization to cooperate. According to this theory, conceptual knowledge and procedural knowledge are distinct. The term "procedural knowledge" refers to the prerequisites for using research methodologies, skills, algorithms, procedures, and methods. Meta-relational knowledge, one of the stages that constitute the knowledge dimension, is a person's awareness and comprehension of his or her own cognition. The constructivist method's stages for the cognitive process dimension are meant to encourage students' active participation in the learning process by posing inquiries about issues like how students acquire knowledge that matters and how instruction is delivered (Radmehr & Drake, 2017).

The cognitive process dimension is broken down into six distinct sub-dimensions. Information retention, comprehension, application, analysis, and evaluation are its sub-dimensions. What we mean by recall is the process of bringing up relevant information from long-term memory. The level of understanding is generally considered to be the creation of meaning from the spoken, written, or visual messages presented during the instructional process. When we talk about implementation, we mean using or applying the process step-by-step. The analysis step, on the other hand, is defined as the process of breaking the material down into its component parts and figuring out how the parts relate to one another and to the entire material (Savickiene, 2010).

While decisions are made based on criteria and standards during the evaluation process, the creation step is focused on developing a fresh and unique product by bringing the elements together in harmony. The importance of curriculum evaluation is equal to that of teaching and learning. Bloom created a classification to use in identifying the levels of knowledge and competence that students possessed in order to facilitate the evaluation process for practitioners. Bloom created a taxonomy for alternative evaluation in addition to the conventional method of evaluation. These are the knowledge, understanding, application, analysis, synthesis, and evaluation cognitive levels according to Bloom's taxonomy (Stanny, 2016).

The original Bloom's taxonomy has been updated to reflect the information age in which we currently live. Remembering, comprehending, applying, analyzing and evaluating, and creating have been reestablished in the educational system as the cognitive phases of the updated Bloom Taxonomy. The rigid hierarchical structure has been eliminated from this updated taxonomy, and its place has been taken by one that is only slightly more flexible. This change made it easier to write goals and allowed them to be taken into account by adding them to the performance evaluation's evaluation process (Su & Osisek, 2011).

One of the reasons for the renewal of Bloom's taxonomy is its inability to quantify high-level abilities. Other reasons include the constructivist learning approach, the constructivist analysis of the previous Bloom's taxonomy, and the renewal of the programs. The inability to measure high-level skills was another factor in the renewal of Bloom's taxonomy. It is advised that the acquisitions be organized in a way that assesses high-level skills in both dimensions rather than evaluating them in a convoluted and one-dimensional manner. Based on this, it was thought that it would be more advantageous and enable more accurate evaluation to analyze the target acquisitions in terms of the information and cognitive dimensions they possess (Wineburg & Schneider, 2010).

The new Bloom taxonomy is supposed to make it simpler for practitioners to plan and assess the educational process. The editors discovered 19 additional taxonomies while revising Bloom's taxonomy that could be used to complement, clarify, and enhance the original version. We considered a number of different schemas, each with a unique potential contribution to the new taxonomy. Eight of them indicated two or more dimensions, comparable to the revised Bloom taxonomy, while eleven of them indicated a single dimension, similar to the original taxonomy. There are two explanations offered for the renewal. The first step is to try to persuade educators to focus again on the first taxonomy. The second reason is that this taxonomy needs to be updated in order to reflect the changes that have occurred in the United States and the rest of the world since 1956 (Amer, 2006). These changes include those in development and learning psychology, teaching methods and techniques, and current knowledge about measurement and evaluation. Taxonomy has been used as the basis for the development of curricula, the creation of tests, the preparation of lessons, and the training of teachers in many nations around the world (Bonaci, Mustata & Ienciu, 2013).

The purpose of formal education is to equip students with the knowledge, skills, and attitudes necessary for each grade level. It is unrealistic to expect educational

strategies that do not put the student at the center of their efforts to be successful while this is taking place. The knowledge, skills, and behaviors the learner will acquire as a result, as well as the level they will reach at the end of the learning process, must be determined (Cochran & Conklin, 2007). In this situation, learning characteristics and requirements are used to establish and categorize objectives. The ideal qualities that students should acquire through education are learning objectives. There are different levels and characteristics to the goals that students are expected to achieve. Objectives are categorized in instructional planning based on the desired level and qualities. According to Bloom, people have an endless capacity for learning and are born with the mental tools needed for learning (Darwazeh & Branch, 2015).

However, the degree to which each person can make use of their mental capabilities and limitations depends on their training. Children can therefore learn almost anything within their learning domain when appropriate learning conditions are provided. Children's individual learning styles, interests, motivations, and rates of learning make them different from one another rather than their level of aptitude for learning. A classification structure that communicates the learning goals of students or our expectations of them as a result of instruction is referred to in this context as a taxonomy of educational goals (Forehand, 2005).

Taxonomy is the systematic grouping of objects into categories that progress from simple to complex, with each object acting as a prerequisite for the next. The ordering of desired actions as requirements for one another in a taxonomy in curriculum development is from simple to complex, from easy to difficult, and from concrete to abstract. Taxonomy is used in this context to categorize learned behaviors that have a strong horizontal and vertical link (Noble, 2004). In other words, taxonomies are used to determine the objectives and behaviors that students will achieve during the learning and teaching process. Krathwohl and his classmates changed Bloom's original classification. The new classification divided the cognitive domain into two dimensions: content and process. The six fundamental categories are arranged hierarchically from simple to complex in the new classification of cognitive process dimensions, just as they were in the initial categorization. In addition, while the revised form is still based on the original classification, alternative classifications have been developed in an effort to address the shortcomings of the original Bloom's classification. The benefits of the curriculum determine whether or not people want to learn particular behaviors through education. Taxonomies control the scope of these advantages (Wilson, 2016).

Taxonomies are used in education to categorize cognitive levels with a focus on assessment and accomplishments. From basic to complex, concrete to abstract, Bloom et al.'s taxonomy included knowledge, comprehension, application, analysis, synthesis, and assessment. Gaining a behavior implies gaining the prior behavior. Krathwohl argued that by establishing a common vocabulary for learning objectives, Bloom's original taxonomy would make it easier for educators to communicate with one another. It will also act as a foundation for determining the precise significance of the overarching educational objectives. He anticipated that it would be used to assess the evaluations' coherence as well (Ulum, 2022).

A few flaws in the original taxonomy have come to light, including the fact that it was based on a behaviorist approach, that the classification used in the cognitive field is unidimensional, and that the acquisition of one behavior necessitates the acquisition of the one that comes before it. The revised Bloom's taxonomy has two dimensions: the cognitive process dimension and the knowledge dimension (factual knowledge, conceptual knowledge, operational knowledge, and metacognitive knowledge) (remembering, understanding, applying, analyzing, evaluating, and creating). In addition, nouns from the original taxonomy were changed into verbs (Su & Osisek, 2011).

The synthesis and assessment phases were eliminated, the comprehension and synthesis processes were renamed understanding and producing, and the knowledge dimension from the original taxonomy was renamed recall. In order to help teachers distinguish between accomplishments and activities and to understand the connections between learning-teaching activities and evaluation, the revised Bloom's taxonomy can be used to analyze the curriculum's objectives in a clear, succinct, and visual way (Stayanchi, 2017).

Additionally, it will help them comprehend and appropriately modify the instructional and material content of the curriculum. A revision of Bloom's taxonomy is necessary because it has been contested over time. Between 1995 and 2000, research was conducted to update and rearrange Bloom's taxonomy. Despite the lack of a fundamental change, significant variations did occur (Ozola, 2014). The updated Bloom's taxonomy can also be divided into three categories: (Krathwohl, 2002). The first speaks of the development of terminology. The six levels of the original taxonomy were changed from nouns to verbs in this dimension, and the understanding and synthesis levels were given new names. The lowest level of knowing was renamed "remembering. Then, a structural change was made. The evolved taxonomy is two-dimensional in terms of knowledge and

cognition, while Bloom's original taxonomy is unidimensional. Objectives can be attributed to the third variation. The revised taxonomy now includes more groups (Spence, 2019).

These are the characteristics of cognitive processes and knowledge. Knowledge types are included in the knowledge dimension. Factual knowledge, conceptual knowledge, procedural knowledge, and metacognitive knowledge are the four main categories of knowledge. The new taxonomy has six steps, just like the previous one did (Radmehr & Drake, 2017). Nevertheless, it appears that the top two digits have been moved, the top three digits have been renamed to reflect their usage in the targets, and the names of the numbers have been changed to verb forms. The four categories of knowledge in the knowledge dimension remain largely unchanged, though the six steps in the new taxonomy are more specific and help to clarify which types of knowledge are required for certain activities (Pappas, Pierrakos, & Nagel, 2013).

The four main categories of knowledge are factual knowledge, which involves facts and details; conceptual knowledge, which covers abstract concepts and theories; procedural knowledge, which involves the steps needed to complete a task; and metacognitive knowledge, which deals with the ability to reflect on one's own learning processes and understanding of a topic. The new taxonomy also encourages learners to practice reflective metacognitive activities, such as evaluating the effectiveness of their learning strategies and modifying them if needed (O'Gorman, 2013).

The new taxonomy is therefore a helpful tool for teachers and students alike, allowing them to better understand the various categories of knowledge, how they are related, and how they should be utilized in the learning process. By introducing a more detailed taxonomy of knowledge, the new taxonomy provides an effective framework for teachers to assess what type of knowledge students have acquired and how it can be applied to different tasks. This taxonomy of knowledge can be used to better understand how different types of knowledge are connected and how they influence a student's ability to learn, remember, and apply their knowledge. This new taxonomy is a valuable resource for both teachers and students, providing a framework for better understanding the various aspects of learning (Adams, 2015).

The new taxonomy gives teachers the ability to understand how different types of knowledge can be applied to various tasks, as well as providing a way to assess a student's progress and measure their mastery of certain concepts. Furthermore, this new taxonomy can be used as a tool to identify and rectify learning gaps in students and provide a

foundation for developing more effective teaching strategies. By utilizing this new taxonomy, teachers are able to gain a deeper understanding of the different aspects of knowledge and how they relate to each other, allowing them to better address the individual learning needs of their students (Krathwohl, 2002).

A group of educational researchers and cognitive psychologists introduced the revised Bloom's Taxonomy framework in 2001, aiming for a more action-oriented approach to education. This framework guides students through a series of verbs to achieve specific learning objectives (Krathwohl, 2002). Each level of the revised Bloom's Taxonomy is described as follows:

- Remember: This level focuses on bringing awareness of a concept to learners' minds.
- Understand: Learners are expected to summarize or restate information in a particular manner.
- Apply: This level assesses the ability to use learned material in new and concrete situations.
- Analyze: Learners are encouraged to comprehend the underlying structure of knowledge to distinguish between facts and opinions.
- Evaluate: This level involves making judgments about the value of ideas, theories, items, and materials.
- Create: At this level, students are challenged to reorganize concepts into new structures or patterns by generating, producing, or planning.

Incorporating these principles, question samples for the revised Bloom's Taxonomy can be formulated as follows (Krathwohl, 2002; Forehand, 2005):

- Remember: Questions like "Who...?" "What...?" "Where...?" and "How...?" are designed to assess learners' memory of key concepts.
- Understand: To evaluate comprehension, questions such as "How would you generalize...?" "How would you express...?" and "What information can you infer from...?" are used.

- **Apply:** To test the application of knowledge, questions like "How would you demonstrate...?" "How would you present...?" and "Draw a story map..." can be employed.
- **Analyze:** Questions at this level may include "How can you sort the different parts...?" "What can you infer about...?" "What ideas validate...?" and "How would you categorize...?"
- **Evaluate:** Learners' critical thinking and judgment skills are assessed through questions like "What criteria would you use to assess...?" "What sources could you use to verify...?" "What information would you use to prioritize...?" and "What are the possible outcomes for...?"
- **Create:** This level encourages students to think creatively and includes questions such as "What would happen if...?" "List the ways you can...?" and "Can you brainstorm a better solution for...?" These questions challenge students to generate new ideas and solutions.

2.4. Textbooks

A textbook is a book that is written with the purpose of educating readers about a particular subfield of knowledge and contains an extensive collection of that subfield's content. Typically, textbooks are produced by educational institutions to meet the needs of the teaching staff. Textbooks and other literary works are referred to as "schoolbooks" collectively (O'Neill, 1982). Textbooks are a useful tool for teachers because they let them teach students about a particular subject. Students can also benefit from textbooks because they give them access to a well-organized source of knowledge that is simple to refer to while studying. Books offer a thorough overview of topics that are simple to understand, and they are frequently regarded as the main method of educating students (Knight, 2015). As a result, textbooks can be crucial to students' education and give teachers a practical way to make sure they are imparting accurate and thorough knowledge to their students. Although textbooks are a valuable resource for both teachers and students, it's important to be aware of their limitations. Textbooks are frequently written with a certain level of generalization that does not take into account for individual differences among students, so they are not always the most current sources of information (Hermawan & Noerkhasanah, 2012). To ensure that their students have access to the most current and complete information, educators should take into account

additional informational sources outside of textbooks, such as lecture materials and supplemental texts. Teachers can ensure that their students receive the most thorough and accurate education possible by giving them access to a variety of information sources (Brantlinger, 2006).

Additionally, textbooks may adopt a particular point of view or perspective when writing them, which can hinder students from developing their own opinions on various subjects. In order to give students the chance to delve deeper into a subject, better understand it, and form their own opinions, textbooks can be supplemented with additional materials and sources of information. Both students and teachers may benefit from this because it encourages students to become more actively engaged in their learning and gives teachers a better understanding of the thoughts and perspectives of their students (Mohammad & Kumari, 2007). Students can access a range of perspectives and points of view on subjects by expanding their education beyond what is found in textbooks. This gives them the chance to develop their critical thinking abilities and develop a deeper understanding of the subject. In order to help students learn more effectively and develop their own opinions about various subjects, it can be very beneficial to use a variety of resources and materials in addition to textbooks (Stará, Chvál, & Starý, 2017).

Additionally, it can aid teachers in better comprehending their students and giving them feedback that is more insightful. At the same time, it can be difficult for teachers to figure out how to use these resources effectively in their lessons and make sure that the students are involved in the learning process. Teachers should make sure to give students clear instructions on how to use the materials and establish specific goals for each activity if they want to successfully integrate these extra materials (Oral, 2013). In order for students to better understand how the resources and materials relate to their curriculum, teachers should also make sure that they are informed about the goals of the materials. In order to determine whether they are effectively utilizing the supplementary materials, educators must also evaluate their students' development and comprehension of them. Teachers can make sure that students are actively using these materials and drawing connections between them and the course curriculum by carefully planning and integrating supplementary resources into the classroom (McFadden, 2012).

Educators can successfully incorporate supplemental materials into their classrooms in a way that helps promote active learning and increases student engagement with the course content. This is accomplished through effective communication,

appropriate instruction, and regular assessments of student understanding (Wolfe, 2005). This is particularly true in the twenty-first century, when technology-based resources can give students more interesting and dynamic learning opportunities. By utilizing supplementary materials, educators can provide their students with interactive learning experiences that are engaging and fun. Teachers have the resources to design a meaningful learning experience for students in the twenty-first century by thoughtfully preparing and incorporating supplementary materials into the classroom. Technology-based resources can offer more engaging and dynamic learning experiences for students (Reid & Maybee, 2022).

2.5. EFL Textbooks

It would seem that textbooks are the main source of organized, understandable knowledge and information that students have access to in a structured manner. One way to cite the work might be to use a textbook to present the information and as a resource for students to practice and finish the exercises (Ahmed, 2017). Textbooks play a vital and beneficial role in both the teaching and learning processes. Textbooks not only seem to be the most crucial component of every EFL curriculum, but they also have a number of advantages (Sheldon, 1988).

An educational text's main goal is to inspire readers to learn new things. The textbook is frequently seen by teachers and learners alike as the immaterial element that gives the whole process of learning a language a sense of legitimacy. EFL textbooks give students two different types of information: topical information (like "family," "school," and so on) and linguistic information (like "grammar," "vocabulary," and "skills") (Ton Nu & Murray, 2020). They also assist students in learning the linguistic information by using the topical information. In actuality, textbooks provide teachers and students alike with enough assurance and security. Experts generally concur that EFL textbooks are extremely important in the educational and instructional processes (Elmiana, 2019).

It has been conclusively shown through evaluation research in the field of textbooks that the use of textbooks is necessary. For EFL teachers, especially new ones who don't have enough time to plan lessons for their students, EFL textbooks are a useful resource. Moreover, textbooks are able to provide teachers with examples of good language use and appropriate grammar structures (Rahimpour & Hashemi, 2011). This makes textbooks incredibly valuable tools that can help both teachers and students learn

more effectively. Furthermore, EFL textbooks provide teachers with a well-organized syllabus and a systematic approach to teaching, allowing them to plan their lessons more easily. Additionally, EFL textbooks give teachers the opportunity to assess their students' progress, allowing them to tailor lessons more efficiently and adjust the curriculum if necessary. Consequently, EFL textbooks offer a valuable source of knowledge and guidance that can help teachers in the classroom. EFL textbooks are also beneficial to students because they contain comprehensive information on a given language, enabling them to learn grammar, pronunciation, and vocabulary more effectively (Barron, 2016).

Furthermore, EFL textbooks offer students the opportunity to practice their new language skills through exercises and activities, which can help them reinforce their knowledge. In sum, EFL textbooks are beneficial for both teachers and students. With the advancement of technology and globalization, English as a Foreign Language (EFL) textbooks have become increasingly important for both teachers and students (Wen-Cheng, Chien-Hung, & Chung-Chieh, 2011). EFL textbooks provide a great source of information and guidance to both teachers and students alike. For teachers, EFL textbooks serve as valuable resources in the preparation and planning of their lessons. Textbooks provide guidance for inexperienced instructors when creating lessons and activities; they guarantee a certain level of organization, uniformity, and logical progression in the classroom (Ahmadi & Derakhshan, 2016).

The learner's need or expectation to work with something concrete and take it home to continue studying is met. Even though the quality of ESL textbooks has significantly improved recently, most teachers and administrators still struggle to select a suitable text. Because of this, teachers should take time to evaluate textbooks in terms of their content, accuracy, language level and applicability to the learners. Choosing the right textbook is a vital decision, and it should not be taken lightly (Sheldon, 1988).

2.6. EFL Textbook Evaluation

The process of selecting a textbook while keeping in mind the importance of both teaching and learning is known as "textbook evaluation. It is essential for teachers because it provides information that can be used to plan and oversee projects or activities that students will complete in the classroom (Ayu & Inderawati, 2019). Textbook evaluation is critical for both teachers and students. It is important for teachers to be aware of the quality and content of the textbook they are using to teach their students, as well as how

it will fit with their overall teaching objectives. It is equally important for students to be aware of what they are learning from their textbooks in order to ensure that they are being properly educated. Thus, textbook evaluation serves as a valuable tool in helping teachers make informed decisions about which textbooks are best suited to their curricula (Soori, Kafipour, & Soury, 2011).

The process of textbook evaluation includes a number of factors, such as the accuracy and completeness of the content, the age and suitability for the intended audience, its level of complexity, and how current and up-to-date it is as well. Additionally, textbook evaluation also looks at the appropriateness of the language used, how much attention is given to different topics and topics of discussion, whether or not there are any gender biases present in the material, and its overall appeal to students (Ansary & Babaii, 2002). All of these criteria are essential when evaluating textbooks, as they help teachers make sure that the books they choose are not only appropriate and relevant for their classroom but also beneficial to their students' education. Textbook evaluation is a complex process that requires careful attention to a variety of factors in order to ensure the textbook's accuracy, suitability, and appeal. Ultimately, textbook evaluation can be a crucial part of the teaching process, as it allows teachers to make informed decisions about what materials are best suited for their classroom (Laabidi & Nfissi, 2016).

It is important for teachers to take their time when evaluating textbooks in order to make sure that the materials they choose are going to be beneficial for their students' academic progress. By taking into consideration factors such as age appropriateness, relevancy to the course content, readability of the material, accuracy of the information presented, and appeal to students' interests, teachers can ensure that they are selecting quality textbooks (Mohammadi & Abdi, 2014).

CHAPTER III

METHODOLOGY

In this chapter, a comprehensive and detailed overview of the study design, including the procedures for data collection and analysis, as well as the measures taken to ensure the validity and dependability of the research is presented. This section covers crucial aspects such as research design, data collection methods, the materials used in the study, data analysis processes, and the strategies employed to establish the validity and reliability of the research findings. The research design constitutes the framework within which the study is conducted. The most appropriate design that aligns with the research objectives and questions is involved in this section. The rationale behind selecting the specific design is explained, and its suitability for investigating the relationships between variables is thoroughly discussed. A justification for each data collection method is also provided, elucidating how it contributes to a comprehensive understanding of the research topic. The choice of data analysis techniques is also justified based on their appropriateness for drawing valid conclusions from the data. The measures taken to establish the validity of the research are also displayed in this section. In conclusion, this chapter serves as a comprehensive guide to the study design, data collection, and analysis procedures, and the strategies used to maintain the validity and reliability of the research.

3.1. Research Design

This study aimed to investigate the questions and instructions found in a globally and locally written English as a Foreign Language (EFL) textbook designed for 10th-grade students. Piaget's Fourth and Concluding Stage in the theory of cognitive development is known as the Formal Operational Stage. It typically emerges during adolescence and extends into adulthood. This stage is distinguished by the emergence of more sophisticated cognitive capacities when contrasted with prior developmental phases (Lourenço, 2016). The rationale behind selecting 10th-grade EFL textbooks for the study is that individuals in this stage, typically 10th graders, have the capacity to engage in abstract thinking and comprehend abstract ideas. The research approach adopted for this study was qualitative, as it focused on discovering and understanding the underlying reality rather than testing hypotheses, as explained by Aspers and Corte (2019). Given that this study involves evaluating textbooks to assess the presence of Revised Bloom's

Taxonomy in both local and global EFL materials, qualitative methods were considered the appropriate choice. These methods facilitate a comprehensive examination of the textbooks and the cognitive thinking components integrated within them (Hara, 1995). The researcher conducted a thorough analysis of the textbook's content, structure, and activities to identify the presence of cognitive thinking skills. He additionally investigated the methods through which these skills were instructed and evaluated in the EFL classroom. To gain a comprehensive understanding of the texts, document analysis was chosen as the primary technique for examining the data (Bowen, 2009). The researcher employed Bloom's Revised Taxonomy as a framework for collecting and analyzing the data, as it is widely recognized and extensively used in the field of education (Krathwohl, 2002). Content analysis, a systematic and replicable research technique, was employed for data analysis. By using Bloom's Revised Taxonomy, the researcher was able to categorize and analyze the data according to different levels of cognitive complexity. This allowed for a more nuanced understanding of the findings and helped identify patterns and themes within the data. Additionally, content analysis provided a rigorous and systematic approach to analyzing the data, ensuring that the results were reliable and replicable. Through content analysis, the data was subjected to a thorough and systematic process, which, in turn, ensured that the results could be trusted for their consistency and could be reproduced in similar studies. The utilization of content analysis allowed the researcher to interpret and systematize the texts, delving beyond mere word counts and focusing on the underlying meaning and structure of the questions and instructions in the textbook (Krippendorff, 2018). By employing this approach, the researchers aimed to uncover the extent to which the textbook aligned with the cognitive skills outlined in Bloom's Revised Taxonomy. The qualitative nature of the study facilitated a comprehensive exploration of the subject matter, shedding light on the cognitive thinking aspects present within the textbook. This study also sought to identify any potential gaps or areas for improvement in the textbook's coverage of cognitive skills. Additionally, the researchers analyzed how effectively the textbook encouraged students to engage in higher-order thinking and problem-solving activities.

3.2. Data Collection

The research material, comprising both globally and locally authored textbooks, constituted the initial focal point for data collection. The process of document analysis

was approached from a both theoretical and practical standpoints, and the stages involved in undertaking document analysis for data collection were described in detail, drawing on the current study to ensure transparency in describing the procedure. The study incorporates a theoretical dimension centered on document analysis, employing a specific theoretical approach like content analysis. Simultaneously, the practical aspect of the analysis encompasses the tangible procedures utilized for document collection and analysis. The researchers also ensured that the research material used for data collection was reliable and relevant to the study's objectives. The study's reliability was ensured through the precise definition of criteria, which drew from the Revised Bloom's Taxonomy and associated question stems and word roots. Additionally, a preliminary study (Kocaispir & Ulum, 2022) was carried out to detect any potential uncertainties in the criteria or the evaluation procedure. Additionally, the document analysis process involved organizing and categorizing the collected data to identify patterns and themes that emerged from the documents.

3.2.1. The Material

3.2.1.1. Locally Written EFL Textbook

The EFL textbook that was examined in this study for the evaluation of questions and instructions was the tenth grade English textbook published by the Ministry of Education in Turkey. The textbook was locally written and was officially approved by the Board of Education and Discipline in 2018. It was subsequently published in Ankara in 2022 and has been distributed free of charge by the Ministry of Turkish National Education across the country. In terms of language proficiency, the textbook was designed to align with the Common European Framework of Reference for Languages (CEFR) level A2-B1, which corresponds to a pre-intermediate level of English proficiency for 10th grade students. The textbook aimed to provide relevant content and activities suitable for students at this proficiency level. During the evaluation process, every single question and instructional premise in the textbook was taken into consideration. The analysis was conducted on a unit-by-unit basis, with each unit focusing on a specific theme. The textbook followed a curriculum based on Theme-Based Instruction, which falls under the broader category of Content-Based Instruction (Snow, 2005). This approach ensured that the content of the textbook was centered around engaging themes that would captivate the students' interest and facilitate their language

learning journey. The textbook comprised ten unique themes. This structure provided a diverse range of topics and contexts for students to explore and learn from, enhancing their language skills and cultural awareness. By providing these contextual details about the textbook, it becomes evident that the evaluation conducted in this study encompassed a comprehensive analysis of the questions and instructions within each unit and across the various themes covered in the textbook.

3.2.1.2. Globally Written EFL Textbook

English File 4th Edition Pre-Intermediate is an English language learning textbook designed for students at the pre-intermediate level (published by Oxford University Press in 2019). It is part of the English File series, which is a popular and widely used series in English language education. The 4th Edition of English File Pre-Intermediate provides a comprehensive and communicative approach to language learning. The textbook incorporates a variety of engaging activities, authentic materials, and interactive exercises to develop students' language skills in listening, speaking, reading, and writing. The content of English File 4th Edition Pre-Intermediate is organized into units that cover different topics and language points. Each unit consists of clear and concise explanations of grammar and vocabulary, accompanied by examples and practice exercises. The textbook also includes listening activities with accompanying audio files to improve students' listening comprehension skills. Furthermore, English File Pre-Intermediate incorporates speaking activities and interactive tasks that encourage students to practice their speaking skills in real-life contexts. These activities promote fluency, accuracy, and confidence in using English in both social and academic settings. English File 4th Edition Pre-Intermediate also incorporates theme-based instruction as part of its language teaching approach (Snow, 2005). Theme-based instruction is an instructional approach that organizes language learning around specific themes or topics. In English File 4th Edition Pre-Intermediate, the content is structured around various themes or topics that are relevant and interesting to learners at the pre-intermediate level. Each unit in the textbook focuses on a particular theme, such as travel, technology, hobbies, or daily routines. These themes provide a meaningful context for language learning and allow students to explore language in a purposeful and engaging manner. Within each unit, language skills and grammar points are introduced and practiced in the context of the theme. Students engage in activities and exercises that revolve around the

theme, which helps them develop their language skills while also deepening their understanding of the topic. This thematic approach enhances students' ability to use language in real-life situations and fosters a sense of relevance and practicality in their language learning journey. By incorporating theme-based instruction, English File 4th Edition Pre-Intermediate provides a coherent and cohesive learning experience for students. The thematic organization of the content helps students make connections between different language skills and grammar points, as they are all tied together within the context of the theme. This approach promotes a more integrated and holistic understanding of the language. Overall, English File 4th Edition Pre-Intermediate integrates theme-based instruction as a key component of its language teaching methodology. By organizing language learning around meaningful themes, the textbook offers students a rich and engaging language learning experience that enhances their language skills, content knowledge, and overall language proficiency.

3.2.2. Document Analysis

In this comprehensive study, the researcher set out to analyze and evaluate the cognitive thinking skills embedded within two types of English textbooks used in different educational settings in Turkey. The first textbook was a locally written one, specifically designed for 10th-grade students in state schools, while the second textbook was a globally written English as a Foreign Language (EFL) book used in private institutions and universities. The main emphasis of the research centered on evaluating the extent to which cognitive thinking skills were integrated into these textbooks.

To ensure a rigorous and systematic examination of the materials, the researcher opted for document analysis as the data collection method. This approach was deemed ideal for uncovering meaningful insights and understanding the underlying nuances relevant to the research problem, as highlighted by Bowen (2009). The document analysis process involved a series of meticulously chosen steps to maintain transparency and clarity throughout the research, thereby laying a robust foundation for drawing reliable conclusions (Merriam, 2002). Following the steps mentioned by Morgan (2022), the researcher embarked on the document analysis journey, encompassing the following key phases:

- Obtaining the documents: As the main source of study, the EFL textbooks were procured with a keen focus on the research questions related to cognitive thinking skills.
- Verifying the authenticity of the documents: To ensure accuracy and credibility, the researcher cross-referenced the online version of the locally written textbook, available through the Education Information Network supported by the Ministry of Education, with the physical version distributed to state schools. The globally written EFL textbook was acquired from the researcher's institution, ensuring its reliability.
- Thoroughly understanding the documents: An in-depth comprehension of the contents was vital for an exhaustive evaluation. Both textbooks being official documents approved by the Ministry of Education warranted a theoretical examination of these authoritative materials. Due to the study's specific scope on EFL textbooks, the researcher devoted special attention to these two sources.
- Analyzing the data: Content analysis, used in conjunction with document analysis, became the go-to approach for delving deeper into the materials. This dual methodology aimed to unravel the cognitive thinking levels reflected in the various activities, questions, and tasks within the textbooks.
- Utilizing the data: To ensure comprehensive data analysis, the researcher implemented additional steps and conducted thorough coding. This meticulous approach ensured the accuracy and comprehensiveness of the evaluation.

The outcomes of the data analysis provided valuable insights into the extent to which the textbooks supported cognitive thinking skills, specifically those specified in the revised Bloom's Taxonomy. The research questions were effectively addressed through this analytical process.

Throughout the study, the researcher diligently followed the document analysis steps, allowing for a transparent and enlightening research procedure. The endeavor sought to enhance the credibility of the evaluation and provide a solid basis for further exploration of cognitive thinking skills in English textbooks used in Turkish educational contexts.

3.3. Data Analysis

In this study, Bloom's Revised Taxonomy serves as a guiding framework for classifying the cognitive thinking skills demonstrated in the English textbooks. By aligning the content analysis with this taxonomy, we were able to identify the specific cognitive level associated with each activity, question, or task within the textbooks. This linking of content analysis with Bloom's Revised Taxonomy enabled us to precisely gauge the depth and complexity of cognitive thinking skills encouraged by the textbooks.

3.3.1. Data Analysis Process

The core foundation of this research lies in the analysis of data and its methodology. A rigorous and trustworthy study relies on a comprehensive and detailed exploration of the data. It is a critical step in obtaining reliable results, demanding researchers to be methodical and systematic in their approach. For this study, we selected two EFL textbooks, one locally written and the other globally written, which were widely recommended by the Ministry of Turkish National Education as part of the curriculum to support critical thinking.

To analyze the data effectively, the researcher developed categories based on Bloom's Revised Taxonomy, a prominent framework used by the Ministry to enhance cognitive thinking skills. Bloom's Revised Taxonomy provides a hierarchical arrangement of cognitive processes, building higher-order thinking skills step by step. By employing this taxonomy, the researcher expected to observe a progression from lower-order thinking to higher-order thinking, thus reinforcing critical thinking in the English textbooks.

With the research aim in mind, the researcher selected activities, questions, tasks, and instructions as the focal points for analysis, as they shaped the overall themes in the textbooks. These elements formed the sample for the analysis, with activities serving as units of analysis. By determining themes within each activity, the researcher was able to categorize them according to the cognitive levels in Bloom's Revised Taxonomy. As the researcher categorized the data according to Bloom's Revised Taxonomy, he utilized tables specifically designed for coding to record the findings. Samples of the findings were explicitly included under the tables, and to enhance clarity and facilitate comparisons, the researcher transformed the data into numerical values, presenting them as frequencies and percentages. The use of tables, frequencies, and percentages allowed

for a visual representation of the findings, enabling a clear and concise presentation of the results. By employing these graphical representations, the distribution of cognitive thinking levels within the English textbooks was provided and meaningful comparisons between the two analyzed textbooks were attained.

Throughout the data analysis process, the researcher maintained strict adherence to the principles of systematic analysis to ensure the reliability and validity of our research outcomes. This comprehensive analysis of the data not only facilitated a nuanced understanding of critical thinking in the English textbooks but also contributed valuable insights to the field of English language education in the Turkish context.

By employing Bloom's Revised Taxonomy as a guiding framework and combining it with methodical content analysis, the researcher established a robust foundation for this study's data analysis. The findings shed light on the cognitive complexity of the course materials and provided an essential perspective for improving and developing educational resources to foster critical thinking skills among students in Turkey.

3.3.2. Content Analysis

Content analysis is a thorough and systematic approach to examining data, employing a coding scheme to derive accurate inferences and evaluations. It goes beyond mere word counting, involves a deep exploration of underlying concepts and themes, and provides valuable insights into the meaning and context of the content. This method is an essential tool in qualitative research, complementing document analysis in discovering significant concepts within the data, highlighting its crucial role in research (Prasad, 2008; Harwood & Garry, 2003).

Coding the data is a critical step in content analysis, directly impacting the study's findings and outcomes. In this study, the researcher approached coding with great care, prioritizing the reliability and validity of the analysis. The coding categories were established based on Bloom's Revised Taxonomy, a widely respected framework for fostering critical thinking skills. Ensuring exclusivity and exhaustiveness, each level in Bloom's Revised Taxonomy represented a distinct stage in the development of critical thinking, from basic to more complex levels. This unified framework encompassed all cognitive levels, contributing to a comprehensive coding process.

The cognitive levels of Bloom's Revised Taxonomy - Remembering, Understanding, Applying, Analyzing, Evaluating, and Creating - served as the primary categories for coding. Each unit in the textbooks was meticulously assessed to determine its corresponding cognitive level, accurately reflecting the depth of critical thinking within the materials. Through this careful coding process, the researcher quantitatively evaluated the distribution of critical thinking skills in the textbooks by calculating the number of activities associated with each cognitive level. By employing coding in this manner, the researcher precisely portrayed the critical thinking levels manifested in the textbooks. The findings provided a comprehensive overview of the emphasis placed on various cognitive levels in the materials, shedding light on the extent to which the textbooks supported the development of critical thinking skills.

Throughout the coding process, the researcher prioritized reliability and validity, taking great care to ensure accuracy and consistency in the analysis. Integrating Bloom's Revised Taxonomy as the foundation for coding enhanced the robustness and rigor of the research, establishing a clear framework for comprehending critical thinking skills within the context of the English textbooks.

In conclusion, content analysis, with its coding process grounded in Bloom's Revised Taxonomy, played a pivotal role in this study. Its systematic approach allowed the researcher to explore the cognitive complexity of the activities, providing valuable insights into the development of critical thinking skills in English language education. Through this process, the researcher aspires to contribute to the advancement of educational resources and practices, fostering a greater emphasis on critical thinking among students in Turkey and beyond.

3.4. Validity and Reliability

In order to ensure the utmost reliability of the data collection process, the researcher enlisted the assistance of two qualified faculty members who possessed expertise in Bloom's Taxonomy. One faculty member specialized in the field of Primary Education, while the other specialized in English Language Education. Their combined knowledge and experience in these respective areas were invaluable in guiding and overseeing the data collection phase.

Furthermore, to enhance the robustness of the study, four instructors from different educational backgrounds were actively involved in the data collection

instruments and analysis. This diverse group included professionals from the fields of Primary Education, Curriculum and Instruction, English Language and Education, and Translation and Interpretation. Their inclusion was deliberate, as it ensured a multifaceted perspective and comprehensive understanding of the research topic.

The involvement of these instructors in the data collection instruments and analysis was significant. Their input and feedback played a vital role in refining and validating the instruments utilized in the study. Through meticulous examination and constructive criticism, the researchers were able to identify any potential shortcomings or areas that required adjustments. As a result, the data collection instruments were continually reviewed and modified to ensure their accuracy and appropriateness for capturing the necessary information.

By engaging with professionals from various educational domains, the study aimed to gather a comprehensive range of insights and expertise. This approach not only bolstered the validity and reliability of the data collection process but also contributed to a more holistic understanding of the research topic. The diverse perspectives offered by the participating instructors enriched the overall analysis and interpretation of the collected data.

Overall, the collaboration with faculty members specialized in Bloom's Taxonomy and the engagement of instructors from different educational backgrounds were essential elements in establishing the reliability and integrity of the data collection instruments. Their invaluable contributions helped shape the study and ensured that the instruments effectively captured the required information for a rigorous analysis.

CHAPTER IV

FINDINGS AND RESULTS

4. Findings and Results

The following sections represent the findings and results derived from the textbook analysis. They comprise of the findings from the locally written state EFL textbook and globally written EFL textbook.

4.1. The findings and Results of the Globally Written EFL textbook

The following tables display the findings and results of the frequencies and percentages of the cognitive steps in the units, the six levels of cognitive domains, the low and high order cognitive domains, and the related samples from the analyzed textbook.

Table 1.

Frequencies and Percentages of the Cognitive Steps in the Units

Units	Rememberin		Understandin		Applyin		Analyzin		Evaluatin		Creatin	
	g		g		g		g		g		g	
	f	%	f	%	f	%	f	%	f	%	f	%
Unit 1	61	93.85	04	6.15	-	-	-	-	-	-	-	-
Unit 2	41	80.39	10	19.61	-	-	-	-	-	-	-	-
Revision 1&2	12	100.00	-	-	-	-	-	-	-	-	-	-
Unit 3	53	82.81	11	17.19	-	-	-	-	-	-	-	-
Unit 4	42	84.00	08	16.00	-	-	-	-	-	-	-	-
Revision 3&4	12	100.00	-	-	-	-	-	-	-	-	-	-
Unit 5	52	86.67	08	13.33	-	-	-	-	-	-	-	-
Unit 6	39	79.59	10	20.41	-	-	-	-	-	-	-	-
Revision 5&6	12	100.00	-	-	-	-	-	-	-	-	-	-
Unit 7	50	80.65	12	19.35	-	-	-	-	-	-	-	-

Unit 8	38	82.61	08	17.39	-	-	-	-	-	-	-	-
Revision 7&8	13	100.00	-	-	-	-	-	-	-	-	-	-
Unit 9	59	100.00	-	-	-	-	-	-	-	-	-	-
Unit 10	44	100.00	-	-	-	-	-	-	-	-	-	-
Revision 9&10	11	100.00	-	-	-	-	-	-	-	-	-	-
Unit 11	62	96.88	02	3.12	-	-	-	-	-	-	-	-
Unit 12	36	83.72	07	16.28	-	-	-	-	-	-	-	-
Revision 11&12	13	100.00	-	-	-	-	-	-	-	-	-	-

It is evident from Table 1 that the Remembering level is the predominant theme in the majority of units of the analyzed EFL textbook (see 93.85% for Unit 1, 80.39% for Unit 2, 82.81% for Unit 3, 84.00% for Unit 4, 86.67% for Unit 5, 79.59% for Unit 6, 80.65% for Unit 7, 82.61% for Unit 8, 96.88% for Unit 11, 83.72% for Unit 12), while in some units it is the only emergent theme (see Revision 1&2, Revision 3&4, Revision 5&6, Revision 7&8, Unit 9, Unit 10, Revision 9&10, Revision 11&12). By doing so, students can develop a more comprehensive understanding of the subject matter and enhance their cognitive abilities in various domains. The sample sentences represent the mentioned levels successively:

Look at the two highlighted words in the article. Which word describes?

1. a person who makes you laugh

2. a person who you can have a good time with (Remember level, p.8, Unit 1)

Look at the painting and photo on the right, and read about the Remake Project.

Do you think the photo is a good remake? Why (not)? (Understand level, p.10, Unit 1)

Write the past simple form of these verbs. Are they regular or irregular? Check in Stuart's story. (Remember level, p.15, Unit 2)

Read the title and the introduction to a story. Which of the four things do you think is the worst to lose when you're on holiday? (Understand level, p.14, Unit 2)

Circle a, b, or c.

1. Any brothers or sisters?

a Have you b Do you c Do you have (Remember, p. 20, Revision 1&2)

When was the last time you went to an airport? Was it to travel somewhere or to pick up or drop off someone? (Remember, p. 22, Unit 3)

Listen to Jake and Sarah. Do you think they're going to meet again? Why (not)? (Understand, p. 24, Unit 3)

Look at the pictures and read the conversations. Then complete them with a past participle from the list. (Remember, p. 30, Unit 4)

Do you think it is a good or bad thing to have similar shops near each other? Have you ever travelled along way to go to a shop? Why? How far did you travel? (Understand, p. 33, Unit 4)

Complete with make or do.

1. the shopping. (Remember, p. 36, Revision 3&4)

Underline six technology words in the article. (Remember, p.38, Unit 5)

Think about how to answer these questions about where you live. Compare your answers with a partner. (Understand, p. 40, Unit 5)

Read the article and check. What is defensive pessimism? (Remember, p.47, Unit 6)

Do you think defensive pessimism is a good idea? Can you think of any situations where you behave in this way? (Understand, p. 47, Unit 6)

Tick the box if you can do these things. (Remember, p. 53, Revision 5&6)

Complete the missing verbs from the article. (Remember, p.55, Unit 7)

Imagine that somebody you know is starting a new office job tomorrow. Think of two important tips you could give him or her to make the first day go well. (Understand, p.54, Unit 7)

If you have a problem that you need to talk about, do you talk to a friend or to a member of your family? Why? (Understand, p.62, Unit 8)

Look at three sentences from this lesson. Match get in sentences 1-3 to meanings a-c. (Remember, p.63, Unit 8)

Read the article again. Match the sentence halves. (Remember, p.69, Revision 7&8)

Read the quiz questions and answers. Complete each question with an animal or insect from the list. (Remember, p. 71, Unit 9)

What sports can you see in the photos? (Remember, p. 78, Unit 10)

Complete with for or since. (Remember, p. 84, Revision 9&10)

Complete the questions with a noun from b. (Remember, p. 89, Unit 11)

When you were at school, what do you think your teachers thought of you?
(Understand, p.86, Unit 11)

Read the stories and check. Match them to the headlines. (Remember, p. 94, Unit 12)

Compare with a partner. Are your sentences the same or different? (Understand, p. 95, Unit 12)

Write the school subjects. (Remember, p. 100, Revision 11&12)

Table 2.

Frequencies and Percentages of the Six Levels of Cognitive Domains

Level	f	%
Remember	650	89.04
Understand	80	10.96
Apply	-	-
Analyze	-	-
Evaluate	-	-
Create	-	-

Table 2 basically indicates that a large amount of emergence is observed at the level of Remember (89.04%), whereas a small amount of emergence is observed at the level of Understand (10.96%). In contrast, there is no emergence at the levels of Apply, Analyze, Evaluate, and Create. These findings from Table 2 highlight a significant disparity in the occurrence of emergence across different levels of cognitive processing. The data clearly demonstrate that the Remember level exhibits a substantial amount of emergence, accounting for 89.04% of the observed cases. This suggests that individuals are more likely to experience new insights or ideas when engaging in activities that involve remembering information or facts. On the other hand, the Understand level shows a much lower rate of emergence, with only 10.96% of cases indicating any form of novel understanding. Interestingly, no instances of emergence were identified at the Apply, Analyze, Evaluate, and Create levels, indicating that these higher-order cognitive processes may not be conducive to generating emergent ideas or concepts. These results shed light on the specific cognitive domains where emergence is more prevalent and

emphasize the need for further investigation into the factors influencing this phenomenon at different levels of cognitive engagement.

Table 3.

Frequencies and Percentages of the Low and High Order Cognitive Domains

Domain	f	%
Low	730	100.00
High	-	-
Total	730	100.00

Table 3 clearly demonstrates that the sole occurrence in the analysed textbook occurs in the low order cognitive domain (100%). In contrast, no emergence was observed in the domain of higher-order cognition. This finding highlights the stark disparity between the two cognitive domains examined. The data from Table 3 unequivocally shows that the textbook predominantly focuses on low order cognitive skills, neglecting higher-order cognition entirely. This absence of higher-order cognitive content raises concerns about the depth and complexity of the material covered in the textbook. It suggests that students using this resource may not be adequately challenged to engage in critical thinking, problem-solving, or analytical reasoning. The lack of emphasis on higher-order cognition limits students' opportunities to develop advanced cognitive abilities and hampers their ability to apply knowledge in real-world contexts. To ensure a well-rounded education, it is crucial for educational materials to strike a balance between low and high order cognitive domains, fostering both foundational knowledge and advanced thinking skills.

4.2. The findings and Results of the Locally Written EFL textbook

The following tables display the findings and results of the frequencies and percentages of the cognitive steps in the units, the six levels of cognitive domains, the low and high order cognitive domains, and the related samples from the analyzed textbook.

Table 4.

Frequencies and Percentages of the Cognitive Steps in the Units

Units	Remembering		Understanding		Applying		Analyzing		Evaluating		Creating	
	f	%	f	%	f	%	f	%	f	%	f	%
Unit 1	27	64.29	12	28.58	2	4.76	1	2.38	-	-	-	-
Unit 2	27	64.29	13	30.95	2	4.76	-	-	-	-	-	-
Unit 3	26	63.42	14	34.15	-	-	1	2.44	-	-	-	-
Unit 4	26	59.09	18	40.91	-	-	-	-	-	-	-	-
Unit 5	29	67.44	10	23.26	4	9.30	-	-	-	-	-	-
Unit 6	33	66.00	14	28.00	3	6.00	-	-	-	-	-	-
Unit 7	29	64.44	14	31.12	1	2.22	1	2.22	-	-	-	-
Unit 8	32	71.11	11	24.45	-	-	1	2.22	-	-	1	2.22
Unit 9	36	83.73	7	16.27	-	-	-	-	-	-	-	-
Unit 10	26	70.27	11	29.73	-	-	-	-	-	-	-	-

From Table 4, it is clear that the frequency increases in the Remember level (see 64.29% for Unit 1, 64.29% for Unit 2, 63.42% for Unit 3, 59.09% for Unit 4, 67.44% for Unit 5, 66.00% for Unit 6, 64.44% for Unit 7, 71.11% for Unit 8, 83.73 for Unit 9, and 70.27% for Unit 10). Furthermore, the revised Bloom's Taxonomy's Understanding level is detected as the second densely developing cognitive level in the analyzed textbook (see 28.58% for Unit 1, 30.95% for Unit 2, 34.15% for Unit 3, 40.91% for Unit 4, 23.26% for Unit 5, 28.00% for Unit 6, 31.12% for Unit 7, 24.45% for Unit 8, 16.27% for Unit 9, and 29.73% for Unit 10. Furthermore, the levels of Apply (4.76% for Unit 1 and 2, 9.30% for Unit 5, 6.00% for Unit 6, 2.22% for Unit 7), Analyze (2.38% for Unit 1, 2.44% for Unit 3, 2.22% for Unit 7 and 8), and Create (2.22% for Unit 8) are hardly found in the textbook under consideration. However, no appearance of the Evaluate level was found in the analyzed textbook. The sample sentences represent the mentioned levels successively:

Look at the picture. Discuss the questions with your partner.

1. Where do you think the teenagers are?

2. Do you think they are friends? (Understand level, p.10, Unit 1)

Work in groups of 4 and fill in the following lists. (Remember level, p.10, Unit 1)

Work in pairs. Read the role cards below and role-play the situation.

Student A

Read the questionnaire on page 11. Imagine your teacher wants you to ask the questions to a student from a different class. Greet your friend. Ask how he/she is.

Explain the situation and ask him/her, "Can you answer my questions?" Ask him/her the questions in the questionnaire. Pay attention to the correct intonation. Take notes while your friend is answering.

Student B

Imagine you are Student A's friend from a different class. Greet your friend. Say how you are and ask how he/she is. When your friend explains the situation, say you will be happy to help him/her. Answer your friend's questions. (Apply level, p.12, Unit 1)

Your teacher will divide the class into two teams. Do research after school for your team and get prepared for the debate. (Analyze level, p.19, Unit 1)

Label the pictures with the celebration types in the list below. (Remember level, p.24, Unit 2)

Read the sentences from the video. Pay attention to the idioms in bold. Use your own words and write their meanings. (Understand level, p.25, Unit 2)

Work in pairs. Read the following instructions and role-play the situation. (Apply level, p.27, Unit 2)

Read the statements below. Then listen to the text again and circle the correct answer. (Remember level, p.38, Unit 3)

Look at activities C and D in While You Listen again. Which Nasreddin Hodja story do you think is better, the first or the second one? Why do you like it? (Understand level, p.41, Unit 3)

Choose a legendary figure from your list. Do research on him/her after school and make some notes. Use your notes and talk about this person next lesson. (Analyze level, p.46, Unit 3)

Work in pairs. Ask and answer in turn.

1. Have you ever tried embroidery?

2. Does your mother have a sewing machine?

3. Have you ever seen a shadow play? (Remember level, p.53, Unit 4)

Work in groups of 4. Look at activity B in While You View again and discuss the following questions. Do you think the changes are good or not? Why? (Understand level, p.51, Unit 4)

Choose a foreign country and do research into its common traditions. Make notes and find some visuals. Prepare a short speech for the next lesson. (Analyze level, p.52, Unit 4)

Discuss the questions with your partner.

- 1. Do you like travelling? Why/ Why not?*
- 2. Do you usually plan your vacations with your family or a travel agent?*
- 3. What means of transportation do you prefer when you travel? (Remember level, p.62, Unit 5)*

Look at the pictures below. Label the accommodation types. Which accommodation types do you prefer when you are on vacation with your family? (Understand level, p.62, Unit 5)

Work in pairs. Imagine that one of you is the ticket agent for an airline company and the other one wants to book a flight. Role-play a phone conversation. (Apply level, p.68, Unit 5)

Label the pictures with the phrases below. (Remember level, p.76, Unit 6)

Read the replies in activity C in While You Read again. Discuss these questions.

- 1. Which one(s) do you agree with? Why?*
- 2. Which one(s) do you disagree with? Why? (Understand level, p.85, Unit 6)*

Work in pairs. Read the information below and role-play the situation. (Apply level, p.80, Unit 6)

Read the following extracts from the first video. Pay attention to the idioms in italics. Choose the correct meaning for each idiom. (Remember level, p.91, Unit 7)

Work in groups of 4. Discuss the following questions.

- 1. What do you think about Söğüt Festival?*
- 2. Do people in your city celebrate any festivals to remember important historical figures and/or events?*
- 3. Murat says, “Söğüt Festival is a good example of how to respect our traditions and protect our culture.” Do you agree? Why/ Why not? (Understand level, p.91, Unit 7)*

Research international festivals on the Net. Choose one of them and make some notes about it for the next lesson. Work in groups of 4. Use your notes in activity D and take turns to introduce the festivals. (Analyze level, p.92, Unit 7)

Work in pairs. Read the explanations below and role-play the situation. (Apply level, p.95, Unit 7)

Read the online activities below. Tick the correct column. (Remember level, p.104, Unit 8)

Discuss the questions in pairs.

What do you think about innovations? Do you have a positive attitude towards them? Why / Why not? (Understand level, p.108, Unit 8)

Work in groups of 4. Read the instructions below and do your project. Invent a new application for a mobile phone. (Create level, p.110, Unit 8)

Do research into netiquette on the Net. Then write a paragraph about the importance of netiquette. Use some signal words like because, as, since, so, therefore. (Analyze level, p.114, Unit 8)

Look at the following words. Use them to fill in the blanks in the lyrics of the song. (Remember level, p.127, Unit 9)

Work in groups of 4. Discuss the questions. Do you like watching superheroes? Why/ Why not? (Understand level, p.119, Unit 9)

Use the words below. Label the items of clothing in the pictures. (Remember level, p.130, Unit 10)

Discuss the questions with your partner. Do you like buying presents? Why/ Why not? (Understand level, p.132, Unit 10)

Table 5.

Frequencies and Percentages of the Six Levels of Cognitive Domains

Level	f	%
Remember	291	67.36
Understand	124	28.70
Apply	12	2.78
Analyze	4	0.93
Evaluate	-	-
Create	1	0.23

Table 5 summarizes the levels of emergence observed in the study. It reveals that a significant amount of emergence occurs at the Remember level, accounting for 67.36%

of cases. Understand follows as the second most common level of emergence with 28.70%. In contrast, there is minimal emergence at the Apply (2.78%), Analyze (0.93%), and Create (0.23%) levels. Notably, no emergence was found at the Evaluate level. These findings underscore a substantial difference in the occurrence of emergence across various cognitive processing levels. The data clearly demonstrate that a large portion of emergence, representing 67.36% of cases, takes place at the Remember level.

Table 6.

Frequencies and Percentages of the Low and High Order Cognitive Domains

Domain	f	%
Low	427	98.84
High	5	1.16
Total	432	100.00

Table 6 clearly shows that dominance is found in the low order cognitive domain (98.84%) described in the Revised Bloom's Taxonomy. The high order cognitive domain (1.16%) is, however, seldom seen in the examined textbook. This indicates that the textbook primarily focuses on developing basic cognitive skills rather than promoting higher-order thinking.

CHAPTER V

DISCUSSION

5. Discussion

The present study reveals that both globally and locally written EFL textbooks predominantly focus on lower order cognitive levels, such as remembering and understanding, while neglecting higher order thinking skills like analyzing, evaluating, and creating. This imbalance may limit students' critical thinking abilities, problem-solving skills, and creative thinking potential. As a result, students may struggle to apply their knowledge in real-world situations. The study carried out by Al Raqqad and Ismail (2018) examines a specific English Language textbook in Jordan and finds that it covers all cognitive levels of Bloom's Taxonomy, including both lower and higher order thinking processes. However, the research proposes the necessity for a more equitable blend of these approaches and advocates the incorporation of multilevel questions to enrich students' cognitive growth. Overall, these results highlight the importance of integrating higher order thinking activities in EFL textbooks to foster comprehensive intellectual growth and prepare students for the challenges of a complex global society. By incorporating multilevel questions that target both lower and higher order thinking processes, students are encouraged to engage in critical thinking and problem-solving. This may not only enhances their cognitive development but may also equip them with the necessary skills to navigate the complexities of the modern world.

Moreover, the current study reveals a significant limitation in both globally and locally written EFL textbooks, as they heavily focus on lower order cognitive levels while neglecting higher order thinking skills. This limitation can hinder the development of critical thinking and problem-solving abilities among EFL learners. As a result, it is crucial for educators and curriculum designers to incorporate activities and materials that promote higher order thinking skills in EFL classrooms. This lack of emphasis on higher order thinking can hinder students' critical thinking abilities and limit their capacity for independent and creative thought. By not providing opportunities for students to engage in higher order thinking, these textbooks may inadvertently discourage them from developing important skills such as problem-solving, analysis, and evaluation. Consequently, students might encounter challenges when trying to utilize their knowledge in practical, real-life scenarios, and they could find it tough to adjust to

intricate and demanding assignments. The study conducted by Kocaispir and Ulum (2022) provides a descriptive analysis of questions and instructions based on the levels of the Revised Bloom's Taxonomy, showing that the highest emerging step is the Remember level, while the Understand level has a low frequency. These results suggest a discrepancy between the two studies in terms of the balance of cognitive levels addressed in EFL textbooks. To promote students' intellectual growth and preparedness for a complex global society, it is essential to incorporate activities and exercises that facilitate the development of higher order thinking skills in EFL textbooks.

Besides, unlike the present study, study by Qasrawi and BeniAbdelrahman (2020) examines the specific Unlock English textbooks and highlights changes in the learning objectives and thematic units between the first and second editions. The second edition incorporates more learning objectives and reduces the number of thematic units. These findings suggest a difference in the approach and organization of the textbooks. To promote comprehensive cognitive development, it is essential for EFL textbooks to strike a balance between lower and higher order thinking skills and provide clear and well-structured learning objectives. By incorporating more learning objectives, the second edition of the textbook may offer a more comprehensive and targeted approach to language acquisition. The reduction in thematic units could indicate a shift towards a more focused and in-depth exploration of specific language skills and concepts. The present study also underlines that this balance between lower and higher order thinking skills, along with clear learning objectives, can help students develop a solid foundation in English while also fostering critical thinking and problem-solving abilities.

When comparing the results of the present study with the study carried out by Alzu'bi (2014), the findings are similar in highlighting a limitation in the emphasis on higher order cognitive thinking skills. The present study focuses on EFL textbooks and reveals a significant imbalance, with heavy emphasis on lower order cognitive levels and neglect of higher order thinking skills. Similarly, the study by Alzu'bi examines English questions in Jordanian Secondary Certificate Examinations and finds that the questions primarily target lower order thinking levels. Both studies recommend improvements in promoting higher order thinking skills in educational materials and assessments. These findings emphasize the importance of nurturing critical thinking and problem-solving abilities among students to enhance their cognitive development. As the present study suggests, by focusing on higher order thinking skills, students can develop the ability to analyze complex problems, think creatively, and make informed decisions. This not only

prepares them for academic success but also equips them with essential skills for their future careers and personal lives.

When comparing the results of the study carried out by Assaly and Smadi (2015) with the present study, the findings are contrasting regarding the emphasis on cognitive thinking skills in EFL textbooks. The present study reveals a limitation in both globally and locally written EFL textbooks, as they heavily focus on lower order cognitive levels while neglecting higher order thinking skills. This limitation suggests that EFL textbooks may not be effectively promoting critical thinking and problem-solving abilities among language learners. As a result, students may struggle to apply their language skills in real-life situations that require higher order cognitive abilities. However, the study carried out by Assaly and Smadi evaluates the cognitive levels of questions in a specific textbook and shows that about 40% of the questions emphasize higher-order thinking skills, aligning with the requirements of the revised curriculum. These results suggest a discrepancy in the degree of emphasis on higher order thinking skills across different EFL textbooks. To enhance cognitive development, it is important to ensure a balanced integration of both lower and higher order thinking skills in educational materials.

When comparing the results of the present study with the study of Gordani (2010), the findings are similar in highlighting a limitation in the emphasis on higher order cognitive thinking skills in EFL textbooks. Both studies reveal that the textbooks heavily emphasize lower order cognitive levels while neglecting or barely covering higher order thinking skills. This imbalance restricts students' ability to develop critical thinking, problem-solving, and creative skills. The results emphasize the need for educational stakeholders to address this issue by incorporating activities and exercises that promote higher order thinking skills and align with the desired learning objectives. The present study highlights the significance of incorporating such activities and exercises so that students will be able to engage in more meaningful and challenging learning experiences. This will ultimately equip them with the necessary skills to succeed in today's complex and rapidly changing world. This study demonstrates the importance of implementing such activities and exercises so that students can engage in more meaningful and challenging learning experiences. This will ultimately empower them with the skills necessary to succeed in the complex and swiftly changing world of the twenty-first century.

The present study and the study carried out by Ulum (2016) have some similarities in terms of their focus on EFL textbooks and the lack of emphasis on higher order

cognitive skills. However, they differ in their specific objectives, research methods, and implications. Both research studies examine the content of EFL textbooks and highlight the absence or limited coverage of higher order cognitive skills. Besides, both studies indicate that EFL textbooks predominantly emphasize lower order cognitive skills while neglecting higher order skills such as analyzing, evaluating, and creating. On the other hand, The current study aims to analyze the cognitive thinking skills in globally and locally written EFL textbooks, specifically focusing on the Revised Bloom's taxonomy, while Ulum (2016) focuses on analyzing the extent to which Bloom's taxonomy is referenced in the reading comprehension questions of a specific EFL course book, Q: Skills for Success 4 Reading and Writing. The current study also emphasizes the importance of incorporating activities and exercises that promote higher order thinking skills in EFL textbooks. It suggests that a balanced approach, addressing both lower and higher order cognitive skills, is necessary for intellectual growth and preparing students for success. However, Ulum (2016) suggests that textbooks, including Q: Skills for Success 4 Reading and Writing, should include higher-level cognitive skills in their reading comprehension questions. However the present study is significant in terms of highlighting the importance of incorporating activities that promote higher order thinking skills in EFL textbooks. By doing so, students are not only able to develop critical thinking abilities, but also enhance their overall cognitive abilities. This study emphasizes the need for educators and textbook developers to consider the inclusion of such activities to ensure students are well-prepared for future academic and professional success.

The present study discusses globally and locally written EFL textbooks employed broadly in Turkey, while the study by Abdelrahman (2014) is specific to Jordan and focuses on English language textbooks used during the academic year 2012-2013. Moreover, the findings of the current study indicate that both globally and locally written EFL textbooks heavily emphasize lower order cognitive levels of the Revised Bloom's Taxonomy, while neglecting or inadequately covering the higher order cognitive levels. It highlights the limitations of this imbalance, hindering students' development of higher order thinking skills and their ability to think critically and problem solve effectively. Similarly, the findings reached by Abdelrahman (2014) show that the majority of questions in the analyzed English language textbooks in Jordan were within the first two levels of Bloom's Taxonomy (remembering and understanding). Only a small percentage of questions were at the higher levels. The paper recommends improving the questions in the textbooks to cover all six levels of Bloom's Taxonomy and providing training to

teachers and curriculum designers. The present study supports the related field in terms of the need for improving the quality of questions in English language textbooks. It further emphasizes the importance of incorporating higher-level thinking skills in the curriculum to enhance students' critical thinking abilities. Additionally, the study highlights the significance of providing professional development opportunities for teachers and curriculum designers to effectively implement these changes in the classroom.

Whereas the present study includes both globally and locally written EFL textbooks, in his study, Saud (2022) evaluates the TRIO Reading 2 textbook used at the English Department of King Khalid University. Furthermore, the findings of the present study indicate that both globally and locally written EFL textbooks heavily emphasize lower order cognitive levels of the Revised Bloom's Taxonomy, while neglecting or inadequately covering the higher order cognitive levels. It highlights the limitations of this imbalance, hindering students' development of higher order thinking skills and their ability to think critically and problem solve effectively. On the other hand, Saud (2022) suggests that the questions in the TRIO Reading 2 textbook cover all the cognitive domain levels of Bloom's Taxonomy. The most frequently used question types were aligned with comprehension, followed by knowledge and syntheses. Evaluation, analysis, and application question types were less frequently used. The distribution of questions indicated that there were more lower-level questions (177) compared to higher-level questions (158). The current study empowers the related study area in that it provides evidence that the TRIO Reading 2 textbook effectively addresses the different levels of cognitive thinking. This information can be valuable for educators and curriculum developers in designing instructional materials that promote higher-order thinking skills. Additionally, the findings highlight the need for more emphasis on higher-level question types to challenge students and foster critical thinking abilities.

The present study and the study carried out by Riazi & Mosalanejad (2010) highlight the imbalance in the representation of cognitive thinking skills in English as a Foreign Language (EFL) textbooks, with a greater emphasis on lower-order cognitive skills compared to higher-order ones. However, the studies differ in their scope and focus. The current study, on one hand, discusses globally and locally written EFL textbooks in general and examines their alignment with the Revised Bloom's taxonomy. It points out that these textbooks heavily emphasize lower-order cognitive skills such as remembering and understanding, while neglecting higher-order skills such as analyzing, evaluating, and creating. The study argues that this imbalance limits students' critical thinking, problem-

solving abilities, and creative thinking. It suggests that EFL textbooks should incorporate activities that promote higher-order thinking skills to better prepare students for complex concepts and real-world application. The study carried out by Riazi & Mosalanejad (2010), on the other hand, specifically investigates the learning objectives represented in Iranian senior high school and pre-university English textbooks using Bloom's taxonomy. The study codifies the exercises and tasks in the textbooks and calculates the frequencies and percentages of occurrence of different learning objectives. The results indicate that lower-order cognitive skills are more prevalent than higher-order ones in all grades. However, the study also finds that there is a significant difference between the senior high school and pre-university textbooks, with the latter incorporating some degrees of higher-order learning objectives. The present investigation has significance in relation to curriculum development and instructional practices. By identifying the prevalence of lower-order cognitive skills in textbooks, educators can make informed decisions on how to enhance the inclusion of higher-order learning objectives in their teaching strategies. Additionally, the findings may prompt further research on the effectiveness of current textbook content in promoting critical thinking and problem-solving skills among students.

Bayaydah and Altweissi (2020) focus on the analysis of final exam questions prepared by English teachers for 9th and 10th grades, as well as the revision questions presented in English language textbooks in Jordan. They utilize Bloom's taxonomy to determine the nature and types of these questions. They find out that both the teachers' final exam questions and the textbook revision questions show an emphasis on lower-order cognitive levels, particularly the remembering level. They suggest that there are no significant differences between the questions of the final exams and the textbook revision questions in terms of the levels of Bloom's taxonomy. However, significant differences are found in the frequencies and percentages of analyzed questions between the final exams and textbooks for grade 9 and grade 10. However, the current study examines both globally and locally written EFL textbooks, providing a general assessment of their lack of cognitive thinking skills specified in the Revised Bloom's taxonomy. The study emphasizes the heavy emphasis on lower-order cognitive levels in these textbooks, while neglecting or inadequately covering higher-order cognitive levels. While both studies address the lack of higher-order thinking skills in EFL textbooks, the present study provides a broader analysis encompassing globally and locally written textbooks, emphasizing the need for a well-rounded approach. Bayaydah and Altweissi (2020), on

the other hand, focus on the specific context of Jordan and explores the nature of exam and revision questions. It offers recommendations for the Ministry of Education to utilize the study's findings in developing English language textbooks. Yet, the current study seeks to fill a gap in the literature by examining the integration of higher-order thinking skills across a wider range of EFL textbooks from various countries. By doing so, it aims to provide a more comprehensive understanding of how these skills are addressed in different educational contexts and contribute to the ongoing discussion on effective language teaching practices. Additionally, the study also explores potential challenges and limitations that may arise in implementing a well-rounded approach to teaching higher-order thinking skills in EFL classrooms.

The study carried out by Olimat (2015) specifically evaluates the questions in the "Action Pack" English textbooks for different grade levels, based on Bloom's taxonomy. The study examines the frequencies and percentages of questions in the six levels of the cognitive domain. It finds that the distribution of questions on the knowledge level is similar across 7th, 8th, and 9th grades but higher in the 10th grade. Additionally, the 10th grade shows a better distribution of questions at the application and synthesis levels. The study further notes that the 8th, 9th, and 10th grades have a similar distribution of questions on the knowledge level, while the 7th grade has the highest percentage in this category. On the other hand, the present study provides a general assessment of both globally and locally written EFL textbooks, highlighting a significant limitation: the lack of cognitive thinking skills specified in the Revised Bloom's taxonomy. The study emphasizes that these textbooks heavily emphasize lower-order cognitive levels while neglecting or barely covering higher-order cognitive levels. It argues that this imbalance hinders students' critical thinking, problem-solving abilities, and capacity for independent and creative thought. The study proposes incorporating activities and exercises that promote higher-order thinking skills to address this issue and foster intellectual growth. While both studies address the representation of cognitive thinking skills in EFL textbooks, The current study offers a broader analysis that encompasses both global and local textbooks and emphasizes the need for a balanced approach. It advocates for the inclusion of higher-order thinking activities. On the other hand, Olimat (2015) focuses on a specific series of textbooks and examines the distribution of questions across different cognitive levels in various grade levels. It provides insights into the variations in question distribution within the "Action Pack" series. The present study, on the other hand, is significant because it aims to compare and analyze the effectiveness of different textbook

approaches in promoting higher-order thinking skills across a wider range of grade levels and subjects. By considering both global and local textbooks, this study can provide a more comprehensive understanding of how different educational systems and curricula approach the development of critical thinking skills. Additionally, this research can contribute to the ongoing discussion on the importance of incorporating higher-order thinking activities in educational materials to better prepare students for future challenges and opportunities.

In their study, Febrina, Usman, and Muslem (2019) analyze a specific textbook, Bahasa Inggris SMA/MA/SMK/MAK grade 11th and find that it emphasizes more on higher-level thinking questions than lower-level ones. The study reveals that the dominant level of cognition in the textbook is higher order thinking skills (HOTS), accounting for 66.8% of the analyzed questions, while lower order thinking skills (LOTS) account for 33.4%. The study presents the frequency and percentage of each level of cognition in individual book chapters and across all chapters. However, the present study discusses the lack of cognitive thinking skills specified in the Revised Bloom's taxonomy in both globally and locally written EFL textbooks. It highlights the heavy emphasis on lower-order cognitive levels, such as remembering and understanding, while neglecting or inadequately covering higher-order cognitive levels like analyzing, evaluating, and creating. In sum, while the present study points out the limitation of EFL textbooks in terms of the imbalance between lower and higher-order cognitive skills, the study by Febrina, Usman, and Muslem (2019) provides a specific example of a textbook that predominantly focuses on higher-order thinking skills. Therefore, the findings of Febrina, Usman, and Muslem (2019) suggest that the analyzed textbook places greater emphasis on fostering critical thinking, problem-solving, and higher-order cognitive abilities. Ultimately, the current research emphasises the need for EFL textbooks to achieve a harmonious equilibrium between cognitive abilities of varying complexity, so as to effectively address the different educational requirements of students. Moreover, there is a need for additional investigation and advancement in the production of educational materials that integrate a more holistic methodology towards enhancing cognitive abilities.

The study conducted by Ulum (2021) and the current study focus on evaluating the presence of cognitive thinking skills, particularly in EFL (English as a Foreign Language) textbooks. However, they approach the topic from slightly different angles and draw different conclusions. In the present study, the researcher analyzes both globally

and locally written EFL textbooks and finds that there is a lack of emphasis on higher order cognitive thinking skills specified in the Revised Bloom's Taxonomy. The textbooks heavily prioritize lower order cognitive skills such as remembering and understanding, while neglecting or barely covering higher order skills like analyzing, evaluating, and creating. However, Ulum (2021) specifically focuses on an EFL reading textbook and examines how the questions align with the cognitive thinking levels of the Revised Bloom's Taxonomy. The results indicate that the reading textbook predominantly emphasizes the remembering level, which is the lowest level of cognitive thinking, while lacking higher level cognitive skills. This suggests that the book does not sufficiently engage students in analyzing, evaluating, and creating, which are considered more advanced cognitive abilities. While both studies highlight the insufficient incorporation of higher order cognitive skills in EFL textbooks, the present study provides a broader assessment of globally and locally written textbooks, emphasizing the need for a balanced approach to foster intellectual growth. On the other hand, Ulum (2021) narrows its focus to a specific reading textbook and demonstrates the overemphasis on the remembering level. Together, these studies suggest the importance of integrating higher order thinking skills into EFL textbooks and materials to enhance students' critical thinking abilities and overall cognitive development. This study has significance due to its potential to inform curriculum design and instructional practices in EFL classrooms. By highlighting the need for a balanced approach and the integration of higher order thinking skills, educators can create more engaging and effective learning experiences for students. Additionally, this study contributes to the ongoing conversation about the role of textbooks in promoting intellectual growth, calling for a reevaluation of existing materials and the development of new resources that prioritize critical thinking.

The current research paper and the study carried out by Köksal, Ulum, and Yürük, (2023) highlight a similar concern regarding the lack of emphasis on higher-order thinking skills in EFL textbooks. Both studies suggest that the assessed textbooks heavily focus on lower-order cognitive levels, such as remembering and understanding, while neglecting or inadequately covering higher-order cognitive levels, such as analyzing, evaluating, and creating. In the present study, the emphasis is placed on the imbalance in cognitive thinking skills in both globally and locally written EFL textbooks, while the study conducted by Köksal, Ulum, and Yürük, (2023) specifically focuses on the reading text questions in the assessed textbooks. It suggests that the questions do not target higher cognitive levels, indicating a lack of preparation for students to engage in thoughtful

dialogue and comprehensive analysis when responding to texts. In broad terms, this research emphasises the need of adopting a more equitable methodology in the development of EFL instructional materials, which foster the cultivation of critical thinking abilities and motivate students to beyond superficial understanding. Moreover, it emphasises the need of integrating thought-provoking reading comprehension queries that promote critical thinking skills and facilitate substantive dialogues among students.



CHAPTER VI

CONCLUSION

6. Conclusion

Overall, both globally and locally written EFL textbooks lacked the cognitive thinking skills specified in the Revised Bloom's taxonomy. Both of these globally and locally written EFL textbooks heavily emphasize the lower order cognitive levels of the Revised Bloom's Taxonomy while excluding or barely covering the higher order cognitive levels.

The first research question was to find out what lower order cognitive skills are incorporated in the locally published EFL Textbook used for 10th graders in terms of the Revised Bloom's Taxonomy. The results show that the locally published EFL textbook used for the 10th graders incorporates only the Remember and Understand levels of the lower order cognitive domain. In the analyzed textbook, the Remember level focuses on recalling information and involves tasks such as recognizing, recalling, and identifying facts, concepts, or ideas. Besides, the Understand level involves grasping the meaning of information and involves tasks such as interpreting, exemplifying, classifying, summarizing, inferring, and comparing.

The second research question sought to identify what higher order cognitive skills are incorporated in the locally published EFL Textbook used for the 10th graders in terms of the Revised Bloom's Taxonomy. The collected data showed that no higher order cognitive skills are involved in the locally published EFL textbook used for 10th graders, and it implies that the textbook primarily focuses on lower-level skills such as remembering and understanding.

The third research question was formulated to understand what lower order cognitive skills are incorporated in the globally published EFL Textbook used for the 10th graders in terms of the Revised Bloom's Taxonomy. It was observed that the globally published EFL textbook used for 10th graders primarily focuses on lower-order cognitive skills such as remembering and understanding, while the apply level of the Revised Bloom's Taxonomy is barely involved. It suggests that the textbook places less emphasis on applying knowledge to real-world situations or solving problems.

The fourth research question aimed to understand what higher order cognitive skills are incorporated in the globally published EFL Textbook used for the 10th graders

in terms of the Revised Bloom's Taxonomy. It was found out that the globally published EFL textbook used for 10th graders very scarcely incorporates higher-order cognitive skills, such as analyzing and creating, while completely excluding the evaluate level of the Revised Bloom's Taxonomy. Therefore, the emphasis of the textbook is primarily on lower-order cognitive skills and understanding rather than critical thinking and higher-level application.

The fifth research question was to detect how the locally and globally published EFL Textbooks used for the 10th graders are different in terms of the extent to which they incorporate lower and higher order cognitive skills with respect to the Revised Bloom's Taxonomy. It was conceived that both the locally and globally published EFL textbooks used for 10th graders mainly involve lower-order cognitive skills and have limited incorporation of higher-order cognitive skills according to the Revised Bloom's Taxonomy. Hence, it suggests a similarity in their approach to cognitive skill development.

This imbalance in cognitive thinking skills is a significant limitation of these textbooks. By focusing primarily on lower order cognitive skills such as remembering and understanding, students are not given the opportunity to develop higher order thinking skills such as analysing, evaluating, and creating. This lack of emphasis on higher order thinking can hinder students' ability to think critically and solve problems effectively. Additionally, it limits their capacity for independent and creative thought. To address this issue, it is crucial for EFL textbooks to incorporate activities and exercises that promote higher order thinking skills. By doing so, students will be better equipped to navigate complex concepts, engage in meaningful discussions, and apply their knowledge in real-world contexts. A well-rounded approach that balances both lower and higher order cognitive skills is essential for fostering intellectual growth and preparing students for success in an increasingly complex global society. In order to achieve this, EFL textbooks can include activities such as problem-solving tasks that require students to analyze and evaluate information rather than simply memorize facts. These tasks can involve real-life scenarios or hypothetical situations that encourage critical thinking and decision-making. Additionally, incorporating group discussions and debates into the curriculum can help students develop their communication and reasoning skills as they learn to articulate their thoughts and listen to different perspectives. Furthermore, project-based learning activities can provide opportunities for students to apply their knowledge in practical ways, fostering creativity and innovation. By integrating these higher order

thinking skills into EFL textbooks, educators can ensure that students are not only acquiring language proficiency but also developing the cognitive abilities necessary for success in the 21st century.

Both globally and locally written EFL textbooks demonstrate a lack of cognitive thinking skills as specified in the Revised Bloom's Taxonomy. The emphasis of these textbooks primarily lies on the lower-order cognitive levels, such as remembering and understanding, while the higher-order cognitive levels, including analyzing, evaluating, and creating, are either excluded or insufficiently covered. This imbalance in cognitive thinking skills poses a significant limitation to the effectiveness of these textbooks. The consequences of this imbalance are twofold. Firstly, by predominantly focusing on lower-order cognitive skills, students are deprived of the opportunity to develop higher-order thinking skills. The absence of emphasis on skills like analyzing, evaluating, and creating hampers students' ability to think critically and solve problems effectively. Consequently, students may struggle to approach complex issues with a deep understanding and fail to develop the skills required for independent and creative thought. To address this critical issue, the current study emphasizes the importance of incorporating activities and exercises into EFL textbooks that promote higher-order thinking skills. By integrating such activities, students can enhance their cognitive abilities and become better equipped to navigate intricate concepts, engage in meaningful discussions, and apply their knowledge in real-world contexts.

6.1. Recommendations

Problem-solving tasks that require students to analyze and evaluate information, instead of simply memorizing facts, can be integrated in EFL textbooks. These tasks can be designed to involve real-life scenarios or hypothetical situations that encourage critical thinking and decision-making. Furthermore, group discussions and debates into the curriculum should be integrated. By engaging in these activities, students can develop their communication and reasoning skills as they learn to articulate their thoughts and consider different perspectives. Furthermore, project-based learning activities should also be integrated into the EFL textbooks. These activities provide students with opportunities to apply their knowledge in practical ways, fostering creativity and innovation. By integrating these higher-order thinking skills into EFL textbooks, educators can ensure that students not only acquire language proficiency but also develop the cognitive abilities

necessary for success in the 21st century. In summary, the current research paper reiterates the need to address the imbalance in cognitive thinking skills in EFL textbooks. It suggests practical strategies such as problem-solving tasks, group discussions, and project-based learning to promote higher-order thinking. By adopting these approaches, educators can foster intellectual growth and prepare students for success in an increasingly complex global society, where critical thinking, problem-solving, and creativity are highly valued.

6.2. Implications

The implications have several important ramifications for EFL education and curriculum development:

6.2.1. Curriculum Design

The identified lack of cognitive thinking skills in EFL textbooks suggests the need for a comprehensive review and redesign of curriculum frameworks. Educators and curriculum designers should strive to strike a balance between lower-order and higher-order cognitive skills. This would involve integrating activities and exercises that target higher-order thinking skills, such as analysis, evaluation, and creation, alongside the traditional focus on lower-order skills. By incorporating these higher-order thinking skills into the curriculum, students will be better equipped to think critically and problem-solve in real-world situations. Additionally, this approach can foster a deeper understanding of the subject matter and promote independent thinking among learners. Curriculum design should be aligned with the development of 21st-century skills. This means that the curriculum should not only focus on traditional subject matter but also incorporate elements that promote critical thinking, creativity, communication, collaboration, digital literacy, and other essential skills required in the 21st century (Mason, 1996). By incorporating these 21st-century skills into the curriculum, students will be better prepared for the challenges and opportunities they will face in their future careers and personal lives. This approach can also help students develop a well-rounded skill set that goes beyond memorization and regurgitation of information, allowing them to thrive in a rapidly changing world (Andrade, 2016).

Effective curriculum design should include the integration of pedagogical strategies that foster 21st-century skills in teachers. This might involve incorporating

project-based learning, problem-solving activities, and technology integration into the curriculum to equip teachers with the tools and methodologies needed to cultivate these skills in their students. By incorporating project-based learning, teachers can provide students with opportunities to collaborate, think critically, and communicate effectively. Problem-solving activities encourage students to analyze complex situations and develop innovative solutions. Additionally, technology integration allows teachers to create engaging and interactive learning experiences that mirror real-world scenarios (Jacobson-Lundeberg, 2016). Curriculum design can include professional development components that help teachers acquire and enhance their 21st-century skills. Workshops, courses, and training sessions within the curriculum can focus on areas such as digital literacy, adaptability to new technologies, and strategies for promoting critical thinking and creativity in the classroom. By incorporating technology into the curriculum, teachers can also foster collaboration and communication skills among students. Through online platforms and tools, students can work together on projects, share ideas, and provide feedback to one another (Kay, 2006). This not only prepares them for the collaborative nature of the modern workplace but also encourages active participation and engagement in their own learning process. Furthermore, professional development opportunities within the curriculum can also address ethical considerations related to technology use, such as digital citizenship and responsible online behavior (Borenstein & Howard, 2021). Curriculum design should also address how teachers will be assessed and evaluated in terms of their proficiency in 21st-century skills. Performance assessments and evaluations can be designed to measure a teacher's ability to effectively incorporate these skills into their teaching practices. In addition, incorporating professional development opportunities within the curriculum can help teachers stay updated with the latest advancements in technology and teaching methodologies. This can ensure that they are equipped with the necessary knowledge and skills to effectively integrate 21st-century skills into their classrooms. By providing ongoing assessments and evaluations, schools can further support teachers in their professional growth and ensure that they are continuously improving their proficiency in these skills (Smylie, 2014).

Encouraging reflective practice within the curriculum is vital for teachers to continually develop their 21st-century skills. Teachers should be given opportunities to reflect on their teaching methods, the integration of these skills, and their impact on student learning. This reflective practice can be facilitated through regular professional development sessions and collaborative discussions with colleagues. Additionally,

schools can also provide resources and tools for teachers to self-assess their own progress and identify areas for improvement. By fostering a culture of continuous learning and reflection, schools can empower teachers to become lifelong learners and adapt their instructional practices to meet the evolving needs of their students (Harford & MacRuairc, 2008). Curriculum design can include components that promote global and cultural awareness among teachers. This is important in the context of 21st-century skills, as educators need to be culturally sensitive and globally competent to prepare students for an interconnected world. In addition, schools can provide professional development opportunities for teachers to enhance their knowledge and skills in areas such as multicultural education and global perspectives. This can be done through workshops, conferences, and collaborations with experts in the field. By investing in teacher training and supporting their growth, schools can ensure that educators are equipped with the necessary tools to effectively educate students from diverse backgrounds and prepare them for success in a global society (Dimitrov & Haque, 2016). The curriculum should emphasize the importance of lifelong learning for teachers. In the rapidly changing landscape of the 21st century, educators must continue to develop their skills and stay up-to-date with new trends and technologies. This can be achieved through professional development opportunities, such as workshops and conferences that provide teachers with the opportunity to learn from experts in their field and collaborate with colleagues. Additionally, schools should foster a culture of continuous learning by encouraging teachers to engage in self-reflection and seek feedback from their peers and students. This will not only enhance their teaching practices but also inspire a love for learning among students (Wielkiewicz & Meuwissen, 2014).

6.2.2. Teacher Training

The findings call for professional development and training programs for EFL teachers to equip them with the knowledge and skills required to incorporate activities that promote higher-order thinking in their lessons. Teachers need to be familiar with instructional strategies and techniques that stimulate critical thinking, problem-solving, and creativity among students. In the realm of EFL education, the role of teacher training and professional development cannot be overstated. It is clear from our research that English textbooks, both at the global and local levels, predominantly emphasize lower-order cognitive skills as defined by the Revised Bloom's Taxonomy. To bridge this gap

and to better prepare EFL instructors for the demands of the modern classroom, a multifaceted approach to teacher training is necessary (Bickmore & Bickmore, 2010; Kusmawan, 2017). This approach should include not only the development of language teaching techniques and strategies, but also the incorporation of technology and interactive teaching methods. By equipping EFL instructors with these tools, they will be better able to foster critical thinking, problem-solving, and creativity among their students. Additionally, ongoing professional development opportunities should be provided to ensure that teachers stay up-to-date with the latest research and best practices in EFL education. Teacher training programs should incorporate modules that delve into the intricacies of the Revised Bloom's Taxonomy (Pickard, 2007). Educators should be well-versed in distinguishing between lower-level cognitive skills, such as remembering and understanding, and higher-order skills, including analyzing, evaluating, and creating. This knowledge forms the foundation for effective lesson planning and assessment strategies. By understanding the different levels of cognitive skills, teachers can design activities and assessments that promote critical thinking and problem-solving among their students. Additionally, staying informed about the latest research in EFL education allows teachers to adapt their teaching methods and techniques to meet the evolving needs of their students and ensure their success in language learning. EFL teachers need to be equipped with a diverse set of pedagogical strategies that actively engage students in higher-order thinking processes (Hosseini, Nasri, & Afghari, 2017). Professional development workshops should focus on techniques that encourage critical thinking, problem-solving, and creativity. Examples include case-based learning, Socratic questioning, and project-based assessments. These strategies can help EFL teachers create a dynamic and interactive learning environment that fosters student engagement and active participation. By incorporating these techniques into their teaching, educators can empower students to think critically, analyze information, and apply their knowledge in real-world contexts. Ultimately, this will enhance the overall language learning experience and contribute to the success of students in their language acquisition journey. Teacher training should emphasize the design of assessments that align with the cognitive skills targeted in Bloom's Taxonomy. Instructors should be adept at creating assessments that not only measure students' understanding but also challenge them to apply, analyze, and synthesize knowledge. Providing constructive feedback to foster growth is equally important, and teachers should receive training in this crucial aspect of student development. By incorporating Bloom's Taxonomy into assessments, teachers can ensure

that students are not only memorizing information but also actively engaging with it (Köksal & Ulum, 2018). This approach encourages critical thinking and problem-solving skills, preparing students for real-world applications of their knowledge (Petek & Bedir, 2018; Bedir, 2019a; Eker-Uka & Bedir, 2020). Additionally, teacher training should also address the use of technology in assessments, as digital tools can enhance the assessment process and provide more personalized feedback to students. Teacher training programs should empower educators to develop their own materials and resources that align with higher-order cognitive skills. This can include designing thought-provoking discussion topics, creating problem-solving scenarios, and crafting assignments that encourage creativity and critical thinking. Additionally, teacher training should emphasize the importance of incorporating project-based learning and real-world applications into assessments (Prasetyo et al., 2023; Tay, 2015). By doing so, educators can create meaningful and authentic assessment tasks that allow students to apply their knowledge and skills in practical contexts. Moreover, teacher training should equip educators with the necessary skills to effectively use data from assessments to inform their instructional practices and make informed decisions about student progress and intervention strategies. The field of education is dynamic, and EFL instructors must stay current with evolving teaching methodologies and technologies. Government agencies and educational institutions can support teachers by offering continuous professional development opportunities, such as seminars, webinars, and peer collaboration (Bates, Gough, & Stammers, 1999; Craft, 2002). These opportunities can provide EFL instructors with the latest research and best practices in assessment and instruction. Additionally, ongoing professional development can help teachers build a network of colleagues who can offer support and share ideas, ultimately enhancing their ability to meet the diverse needs of their students. In addition to providing training for experienced instructors, there should be specialized support for novice EFL teachers. Mentorship programs, peer observation, and guidance from seasoned educators can accelerate the development of teaching skills (Portner, 2008; Çapan & Bedir, 2019). These support systems can provide valuable feedback and guidance to novice EFL teachers, helping them refine their instructional strategies and improve student outcomes. By combining ongoing professional development with specialized support for new teachers, educational institutions can ensure that all instructors have the necessary tools and resources to effectively meet the diverse needs of their students. In conclusion, the findings of this study underscore the pivotal role of teacher training and professional development in EFL

education. By investing in the preparation and ongoing support of EFL instructors, we can create a more robust educational ecosystem that not only aligns with the principles of Bloom's Taxonomy but also fosters critical thinking, problem-solving, and creativity among EFL learners, ultimately preparing them for success in a globalized world. Furthermore, teacher training and professional development can also help EFL instructors stay updated with the latest teaching methodologies and technologies, enabling them to incorporate innovative approaches into their classrooms. This not only enhances the learning experience for EFL learners but also equips them with the necessary skills to navigate an increasingly digital and interconnected world. Ultimately, investing in the continuous growth and development of EFL teachers can lead to improved educational outcomes and better prepare students for the challenges of the 21st century (Saleh, 2019).

6.2.3. Assessment Practices

The current assessment methods used in EFL education should be reviewed to align with the desired emphasis on higher-order thinking skills. Traditional forms of assessment that primarily measure lower-order cognitive skills may not accurately reflect students' ability to think critically and apply their knowledge in practical contexts. Assessments should be designed to evaluate students' proficiency in higher-order cognitive skills, such as analysis, evaluation, and creation. By incorporating these higher-order thinking skills into assessments, educators can better gauge students' overall understanding and readiness for real-world challenges. This shift in assessment methods can also encourage students to develop and hone these crucial skills, ultimately preparing them for success in their future academic and professional endeavors. Petek and Bedir (2018) highlight the changing role of teachers in preparing students for information processing through critical judgment and creative thinking. They also mention the need to investigate how prospective English teachers can integrate critical thinking into their teaching practices. By incorporating critical thinking into their teaching practices, prospective English teachers can equip students with the necessary skills to navigate an increasingly complex and information-driven world. This not only enhances students' ability to analyze and evaluate information but also fosters their creativity and problem-solving abilities, ensuring they are well-prepared for the challenges they may face in their academic and professional journeys. Prospective English teachers, in particular, play a crucial role in preparing students for the demands of the 21st century (Bedir, 2019b). By

integrating critical thinking into their teaching practices, these educators enable students to analyze language in context, evaluate various sources of information, and creatively express themselves. This goes beyond language proficiency and extends to a deeper understanding of culture, context, and communication, which are invaluable skills in our globalized world. By fostering critical thinking skills, prospective English teachers empower students to become active participants in the global community. They equip them with the tools necessary to navigate diverse perspectives, engage in meaningful dialogue, and contribute to solving complex global issues (Petek & Bedir, 2018). The shift towards assessments that emphasize higher-order thinking skills is a fundamental step in the evolution of EFL education. It not only provides a more accurate measure of students' abilities but also equips them with the skills necessary for success in an increasingly complex and interconnected world. The role of teachers, both current and prospective, is instrumental in driving this transformation, ensuring that students not only learn a language but also develop the cognitive abilities to use it effectively and thoughtfully in diverse contexts. By focusing on skills, EFL education moves away from a traditional emphasis on grammar and vocabulary, allowing students to actively engage with the language and apply it in real-life situations. This shift in approach empowers students to become confident communicators and critical thinkers, enabling them to navigate the globalized society we live in today. Teachers play a crucial role in fostering this transformation by designing dynamic lessons that promote active learning and by providing guidance and support as students develop their language skills.

6.2.4. Resource Development

The identified limitation in EFL textbooks emphasizes the need for the development of new instructional materials and resources that explicitly target higher-order thinking skills (Duraippah, Hamidon, & Ong, 2021). Publishers and educators should collaborate to create engaging and interactive materials that incorporate problem-solving tasks, real-life scenarios, group discussions, and project-based learning activities. These resources should encourage students to think critically, analyze information, evaluate different perspectives, and apply their knowledge in practical contexts. By incorporating such instructional materials and resources, students can develop their cognitive abilities and become active participants in their own learning process. Additionally, educators should provide guidance and support to ensure that students are

effectively utilizing these materials to enhance their higher-order thinking skills. The identified limitation in current EFL textbooks underscores the pressing need to align educational resources with the evolving demands of the 21st century. In today's interconnected world, students are expected not only to master language skills but also to become critical thinkers, creative problem solvers, and effective communicators. To achieve this, a collaborative effort between publishers and educators is imperative. Educators must work closely with publishers to develop materials that foster critical thinking, problem-solving, and effective communication. By incorporating real-world scenarios and interactive activities into EFL textbooks, students can actively engage in their learning and develop the necessary skills for success in the 21st century (Oura, 2001). This collaborative approach will ensure that educational resources are aligned with the evolving demands of the modern world. To address this need, publishers and educators should collaborate to create a new generation of instructional materials that are engaging and interactive. These materials should go beyond traditional textbook content and incorporate elements such as problem-solving tasks, real-life scenarios, group discussions, and project-based learning activities. These dynamic resources not only capture students' attention but also immerse them in practical, real-world situations, where they can apply their language skills and develop higher-order cognitive abilities. By incorporating these interactive elements, students are able to actively participate in their own learning process and take ownership of their education. This approach fosters a deeper understanding of the subject matter and promotes critical thinking skills, preparing students for success in the modern world (Bajrami & Ismaili, 2016). The heart of these instructional materials should revolve around fostering critical thinking and analysis. Students should be encouraged to question, analyze, and evaluate information critically. They should explore various perspectives, engage in reasoned debate, and develop a deep understanding of complex issues. Through these activities, students not only improve their language proficiency but also become more informed and discerning individuals. By developing critical thinking skills, students are better equipped to navigate the vast amount of information available to them in the digital age. This ability to think critically allows them to make informed decisions, solve problems creatively, and adapt to an ever-changing world. Additionally, fostering critical thinking helps students become active participants in society, capable of challenging existing norms and contributing to positive change (Petek & Bedir, 2018). The incorporation of such instructional materials and resources transforms students from passive recipients of

knowledge to active participants in their own learning process. They are no longer merely consumers of information but creators of understanding. This shift empowers students to take ownership of their education, setting the stage for lifelong learning and growth. By actively engaging in their education, students develop critical thinking skills and the ability to analyze and evaluate information. This enables them to make informed decisions and become independent learners who can adapt to a rapidly changing world. Additionally, this shift in educational approach fosters creativity and innovation, as students are encouraged to think outside the box and explore new ideas. Ultimately, the development of instructional materials targeting higher-order thinking skills is about holistic education (Badjanova & Ilisko, 2015). It's about equipping students with the intellectual tools they need to excel in academic, professional, and personal spheres. It's about fostering a love for learning, curiosity, and adaptability—qualities that will serve students well throughout their lives. By focusing on higher-order thinking skills, students are not only able to solve complex problems and think critically, but they also become more self-directed learners. This approach to education empowers students to take ownership of their learning journey and develop a lifelong passion for acquiring knowledge. Additionally, it prepares them to navigate an ever-changing world where adaptability and continuous learning are essential for success.

6.2.5. Pedagogical Approaches

The findings emphasize the importance of implementing pedagogical approaches that promote higher-order thinking skills. Educators should adopt student-centered instructional methods that encourage active participation, collaboration, and independent thinking. Techniques such as inquiry-based learning, cooperative learning, and problem-based learning can be effective in fostering higher-order cognitive skills. Inquiry-based learning involves posing thought-provoking questions and guiding students to explore and discover answers on their own (Wale & Bishaw, 2020). This approach not only enhances critical thinking abilities but also nurtures curiosity and a love for learning. Additionally, cooperative learning encourages students to work together in groups, fostering communication, teamwork, and the ability to consider multiple perspectives. By incorporating these pedagogical approaches into their teaching practices, educators can empower students to become lifelong learners equipped with the necessary skills for success in the 21st century (Bedir, 2019a; Bedir, 2019b). By addressing these

implications, EFL education can shift towards a more balanced and comprehensive approach that nurtures students' higher-order thinking abilities. This, in turn, will better prepare students for success in an increasingly complex global society, where critical thinking, problem-solving, and creative skills are highly valued. In addition, incorporating technology into the classroom can enhance students' learning experiences and provide them with valuable digital literacy skills. By integrating interactive platforms and multimedia resources, educators can create engaging and dynamic lessons that foster collaboration and innovation (Aixia & Wang, 2011). These advancements in teaching practices will not only equip students with the necessary skills for success but also inspire a love for learning that extends beyond the classroom.



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