

An Analysis Of Reading Comprehension Questions In English Textbook " English For Iraq" According To Revised Bloom's Taxonomy

Maha Nader Tayyeh¹, Asst. Prof. Sabeeha Hamza Dehham², Asst. Prof. Dr. Hadeel Aziz Muhammed³

^{1,2,3} College of Basic Education/University of Babylon
sabeehadehham66@gmail.com

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Abstract: This research aims to analyze reading comprehension questions available in the English textbook, namely, "English for Iraq" for 2nd intermediate grade based on the cognitive domain of Bloom's taxonomy. To reach this end, a mixed method of content analysis was performed. The sample of the study consisted of all reading comprehension questions found in the textbook where the researcher examined (282) questions. The instrument that was used to collect, list, and classify these questions according to their cognitive levels was a checklist based on Bloom's taxonomy. Then, the percentages of each level that appeared in each study unit were calculated. The results revealed the following: the highest percentage of the questions were remembering (49.65%), and understanding (36.52%), and less for the other levels, applying (2.48%), analyzing (4.26%), evaluating (6.38%), and finally, creating (0.71%). These results exposed that all the cognitive levels were covered by the reading comprehension questions. However, most of the questions were dominated by lower-levels of cognitive processes. This indicates that the above-mentioned textbook failed to engage learners in the questions requiring higher-order levels because of the imbalanced distribution among the six levels of the cognitive domain.

Keyword: Content analysis, Textbook, Reading Comprehension, Bloom's Taxonomy

1. Introduction:

Teaching is a useful activity. Through teaching, we mean to make certain required changes in learners. Teaching has definite aims and objectives. According to these definite objectives, the syllabus is defined and the learner's academic achievement is determined. ^{1}

In English language teaching, reading comprehension skill plays an important role. Effective reading cannot be assumed without reading comprehension.

The primary aim of reading is to comprehend what is being read. To assist and assess comprehension, reading text is followed by several questions. To be effective, comprehension questions must be formulated in such a way that they systematically improve comprehension skills. To do so, a scientific framework for constructing such questions has to be adopted. Bloom's taxonomy is an appropriate framework to do this. ^{{2}{3}}

1.1 Statement of the Problem

Generally speaking, all textbook materials, including reading comprehension questions, should be carefully designed because the textbooks have an essential role in the teaching and learning process. In their teaching, teachers mainly adhere to textbooks and teacher's guide directions. As a result, the textbooks chosen by the Ministry of Education have a significant influence on teachers, what they lecture, and what students acquire. As a consequence of the important effect that textbooks have on the English learning process in Iraq, English textbook analysis and assessment are needed. ^{{4}{5}}

Because of the important role of reading comprehension questions in developing thinking, the researcher thinks that they are a necessary aspect of the textbook. Thus, analyzing these questions is a significant process that helps us to assess the questions' strengths and shortcomings, as well as the degree to which they participate in the development of students' thinking abilities.

1.2 Research question

"To what extent do the reading comprehension questions of the English textbook "English for Iraq" for 2nd intermediate grade meets revised Bloom's taxonomy?"

1.3 Aim of the Study

This study aims to:

" identify the existence of the cognitive domain levels, in English textbook "English for Iraq" for 2nd intermediate grade based on Bloom's taxonomy."

1.4 Significance of the Study

1. The study will help syllabus designers and curriculum developers to recognize the weaknesses and strengths of reading comprehension questions in the textbook to avoid and improve the weaknesses concerning developing thinking.

2. This study will be beneficial for teachers to modify these questions if the questions in the textbook don't meet learners' needs.
3. It helps the other researchers as a guideline in conducting similar research about English textbook analysis.

1.5 Limitations

The research is limited to:

1. Analyze 2nd intermediate grade English textbook that used in the Iraqi Educational system.
2. Investigate only reading comprehension questions in the light of revised Bloom's taxonomy of the cognitive domain.
3. The present research is carried out in the academic year (2020/2021).

1.6 Procedures

The following procedures are adopted to attain the purpose of the current study:

1. Reviewing the theoretical literature that dealt with the topic of this research.
2. Collecting the sample.
3. Constructing the instrument of the research.
4. Obtaining the instrument's validity and reliability.
5. Analyzing the reading comprehension questions in the light of the six levels in revised Bloom's taxonomy.
6. Determining the number of frequencies and percentages of the analyzed questions.
7. Discussing the results and concluding.

2. Theoretical Background and Previous Studies

2.1 Content Analysis

Several contributions that offer definitions of content analysis of them are as follows:

According to Berelson, content analysis is characterized as a research method for explaining the evident content of communication in a systematic, and quantitative manner.^{6}

It aims at identifying and deriving facts, whether positive or negative, to conclude about the appropriateness of the content.^{7}

On the other hand, Kaplan proposes that content analysis is a technique for organizing and quantifying the meanings of a specific body.^{8}

Content analysis, according to Krippendorff, is a research technique aimed at constructing correct deductions from texts (or other meaningful matter) to how they are used. In content analysis, Krippendorff uses the term "*technique*" to refer to the specialized procedures that involve in analyzing process which is learnable and independent of the researcher's authority. Content analysis, as a research technique, opens up fresh visions and extends a researcher's knowledge of certain phenomena. The use of the term "*text*" in the description does not indicate that content analysis is limited to written material. As a consequence, the words "or other meaningful matter" involve.^{9} Any kind of communication (textbook, e-mail messages, music, magazines, images, political speeches, or novels) can be used as the raw material for content analysis.^{{10}{11}}

2.2 Some Benefits of Content Analysis:

The content analysis presents some benefits to researchers. They are as follows:^{12}

1. Analyzing the content of textual data can decrease bias during data collection. It can serve to avoid some of the problems that happen with surveys and experimental methods. The interaction between researchers and their informants may occur abnormally without awareness when collecting data, resulting in inaccurate information.
2. Content analysis can control large amounts of materials. It has clear procedures and quality control checks that let a few or a large number of analysts assess large amounts of textual data. Furthermore, because of the clear protocols and quality control forms, two or more companies of analysts can work in various geographic locations on the same kind of data.
3. Since it is a systematic method, the content analysis may help the analysts discover more about the materials they analyze. It contains structured forms that help analysts to obtain more relevant information than if they were only casually reading the same materials.
4. Content analysis can validate other assessment methods. If the results of the content analysis are not the prime evidence in the assessment, they can be used to support other results.

2.3 Textbook:

The medium is a tool service to assist teachers in teaching activities. Typically used to make it easier for teachers to clarify instruction materials. In general, the most commonly used media is a textbook because it is easy to carry, buy, and learn. Although many kinds of media can compete with print materials, the textbook is still the school's major resource.^{13}

Textbooks and other instructional media are seen as important tools for conveying skills, knowledge, and ideals to the new generation.^{{14}{15}} Kubota and Austin emphasize that teaching materials, including textbooks, construct and reflect communications on what is worthy to learn. Textbooks consist of instructional materials,

exercises to improve the understanding of students, and assessments. ^{16}Since textbooks play such an effective role in language teaching, they must be of good quality, useful, and relevant for the context and learner. ^{{17}{18}}

Analyzing and assessing textbooks provides supervisors and teachers with concrete information about the positive and negative points of the evaluative textbooks. This valuable information helps to identify and address the needs of teachers and students. This valuable information assists to identify the needs of teachers and students. ^{19}Ellis also emphasizes that the textbook needs to be examined and evaluated to decide whether it is good enough to use the materials all over again, which tasks 'useful' and which don't, and how to improve the materials to be used efficiently in the future. ^{20}

2.4 Reading Comprehension:

Reading comprehension can be defined as the act of comprehension and forming meaning from a text. ^{21} It refers to the practice of extracting and forming meaning at the same time through interaction with written language. ^{{22}{23}}

According to Kirby, reading comprehension requires decoding the terms and after that employing prior knowledge to form a convergent comprehending of the text. ^{24}

Snow and Sweet mention that comprehension comprises three components: ^{25}

1. The reader is processing the written symbols to comprehend the intended meaning.
2. The text or the passage to be understood.
3. The reading activity in which comprehension took place.

Comprehension is a dynamic and interactive practice of forming meaning by combining past experience and learners' knowledge with the information in the text. The main determining factor of reading comprehension is past knowledge because in order to obtain meaning from the reading paragraph we add meaning to the print. ^{{26}{27}}

2.5 Revised Bloom's Taxonomy

In 2001, a group of cognitive psychologists, educational researchers, and assessment experts had been modified and reproduced Bloom's Taxonomy. ^{28}There are some changes in the revised taxonomy as stated by Forehand, there are terminology changes; the first level "*knowledge*" is retitled as "*remembering*" also, levels of "*comprehension*" and "*synthesis*" are retitled as "*understanding*" and "*creating*". Moreover, the order of synthesis/create and evaluation/evaluate was switched. ^{{29}{40}}Besides, the main important modification in the revised taxonomy is the move from one to two dimensions which are knowledge dimension and cognitive dimension. ^{30}

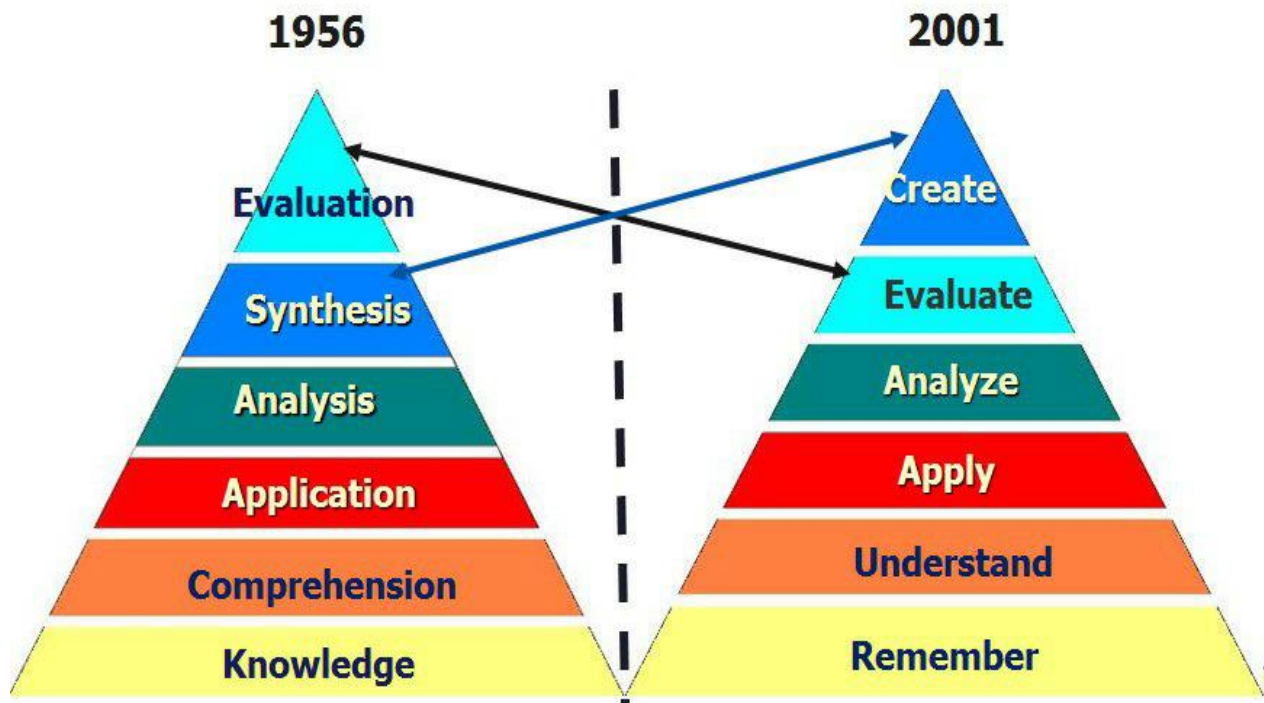


Figure 1
Bloom's Taxonomy, 1956 and Revised Bloom's Taxonomy, 2001(Wilson, Leslie O., 2001)^{31}

2.5.1 The Knowledge Dimension

Knowledge dimension consists of four categories they are as follows: ^{32}

1. Factual

It is defined as the essential information about a specific topic or field that learners must be familiar with.

2. Conceptual

It is the understanding of the relationships and principles that lie behind a domain. It refers to the knowledge of categorizations, models, hypotheses, principles, and structures.

3. Procedural

It denotes the knowledge or information that assists learners how to get something done. It involves techniques and procedures, specific skills, and criteria for deciding when to utilize suitable actions.

4. Metacognitive

It is the awareness of one's thinking processes. This category was recently added because the latest research has provided us with new perspectives on learners' cognitive processes. Metacognitive knowledge enables students to be aware of what they are doing and why, and how to use the learned skills in different situations

2.5.2 The Cognitive Dimension

According to Anderson and Krathwohl, levels of a cognitive domain are defined as follows:^{{33}{39}}

1) **Remembering:** the ability to retrieve related knowledge from memory. This related knowledge could be a group or only one of conceptual, factual, procedural, or metacognitive knowledge.

2) **Understanding:** the ability to demonstrate comprehension by building meaning from educational messages; graphic, written, or oral.

3) **Applying:** the ability to use procedure knowledge to do tasks or solve problems.

4) **Analyzing:** the ability to break data into its elements and decide how the elements are interrelated to one another.

5) **Evaluating:** the ability to make decisions about the value of materials. The decisions are based on specific criteria and standards and standards.

6) **Creating:** the ability to put elements together to formulate a new outcome by working on certain elements in a way they haven't ever existed before.

2.3 Previous studies:

1. Muchlis (2015):^{{34}{36}{37}{38}}

This study is concerned with examined high and low order of thinking in reading comprehension questions in English language textbook used by Forestry Vocational School of Samarinda in the light of the cognitive level of the original Bloom's taxonomy. The outcomes revealed that the reading comprehension questions measure all the six cognitive levels of the taxonomy. Most of these questions focus on measuring knowledge level that was at a percent of 58 %. Meanwhile, comprehension level was 15%. Then, the application level was 4.5 %, the analysis level was 6%, the synthesis level was 12%, and the evaluation level was 4.5%. The total amount of low-order thinking questions were 78%. On the other hand, the total amount of high-order thinking questions was 22%.

2. Motlhabane (2017):^{35}

This study aimed at analyzing the final year physics examination questions for grade 12 in South Africa in terms of low order and high order thinking skills in the light of revised Bloom's taxonomy. The findings indicated that applying level was more predominant than other ones. The cognitive levels of lower-order thinking questions, that is remembering, understanding, and applying represented by 19%, 16%, and 64% respectively. Alternatively, high order thinking levels; analyzing, evaluating, and creating weren't involved in the examination questions.

3. Methodology

3.1 Research Methodology:

This study is designed as descriptive content analysis to examine reading comprehension questions in the textbook. The descriptive method means any study that explains an event in numerical terms. ^{36}

3.2 Research Sample:

The sample of this study is all reading comprehension questions located in the English textbook which are (282) questions.

3.3. Instrument of Data Collection:

To accomplish the aim of this research, the researcher constructed a checklist based on the cognitive domain of revised Bloom's taxonomy. A table of nine columns sets up the checklist; question's serial number, location, reading questions, along with the six cognitive levels arranged in sequence (remembering, understanding, applying, analyzing, evaluating, and creating).

3.4 Face validity:

Even though Bloom's taxonomy was accepted by the educational society and determined to be a valid instrument of classification, the researcher confirmed the face validity of the research instrument by displaying it to a group of ten experts.

3.5 Reliability:

The researcher uses two ways to determine the reliability of the coding process:

1. The researcher selected a random sample (about 12%) of the overall number of reading comprehension questions (282) in the textbook. The sample was reanalyzed with a three-week interval to determine the agreement between the researcher and herself across the time, it was found that the consistency was 0.94.

2. The researcher asked another analyst to analyze the same sample of the questions, it was shown that the consistency was 0.97.

3.6 Statistical Means:

The percentage was used as a means of calculating the frequency of data relating to each level of the cognitive domain. While Holstiequation(1969) was used to find the reliability coefficient of the analysis. Both mentioned statistical means have been used to attain the purpose of the present research.

4. Findings and Discussions:

The researcher examined the reading comprehension questions found in the English textbook based on the cognitive levels to answer the research question. Table (1) below displays the findings represented by frequencies and percentages.

	Cognitive levels	Frequencies	Percentage
Low order processes	Remembering	140	49.65%
	Understanding	103	36.52%
	Applying	7	2.48%
High order processes	Analyzing	12	4.26%
	Evaluating	18	6.38%
	Creating	2	0.71%
	total	282	100%

Table (1)

Frequencies and Percentages of Reading Comprehension Questions in each Taxonomy Level

It is obvious from the above table that all the cognitive levels of the taxonomy are provided in reading comprehension questions. However, these levels are not given the same weight, they were presented in the textbook with different percentages. Table (1) shows that the remembering level occupies the highest percentage with 140 questions (49.65%). On the second position, the understanding level appears with 103 questions (36.52%). Evaluating level comes third with 18 questions (6.38%), followed by analyzing level with 12 questions (4.26%), applying level with 7 questions (2.48%), and finally, creating a level with 2 questions (0.71%).

The domination of low order processes and the lack of high order processes of the questions in the textbook denote that the textbook failed to present sufficient high order levels of reading questions, taking into account that this textbook is taught in the 2nd intermediate grade and the textbook of this grade requires high order levels of thinking more than the previous grades to prepare students for the preparatory stage. To attain the necessary knowledge required for developing thinking, the cognitive demands of the content provided to learners must be of different levels and appropriately balanced. The intended balance here means that the cognitive levels should take into consideration the theory of Bloom which indicates the gradual and balanced transition from one level to the other.

5. Conclusion

This study showed that there were some limitations in the reading comprehension questions presented in the textbook due to the unbalanced use of cognitive domain levels. This demonstrated that these levels were not well distributed. The most dominant level of revised Bloom's taxonomy was the remembering level. It denotes that the authors of the textbook want the students to recall materials not to improve thinking skills. The authors were not successful in taking into account the value of training learners on the high order levels, which will ultimately contribute to enhance thinking at higher school stages or even for the needs of daily life.

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