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THE HIGHER AND LOWER-ORDER THINKING SKILLS (HOTS AND LOTS) IN UNLOCK ENGLISH TEXTBOOKS (1ST AND 2ND EDITIONS) BASED ON BLOOM'S TAXONOMY: AN ANALYSIS STUDY

Research article

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Abstract

This study aims at analyzing *Unlock English Reading, Writing and Critical Thinking Skills* Textbooks (First and Second editions) in terms of the inclusion of the lower and the higher order thinking skills. The current study is a descriptive content analysis paper that followed a checklist containing the cognitive levels of Bloom's Taxonomy as well as a checklist of the possible verbs by OPAR (2012) that combined the Revised Taxonomy as well. The finding in this study indicated that majority of the cognitive objectives in the second edition belong to both LOTS (Comprehension) and HOTS (Analysis and Synthesis) whereas the focus of the first edition was mainly on Comprehension and Analysis. Some objectives, also, were paraphrased to reflect the cognitive objectives where they were more related to reading comprehension sub-skills (skimming, scanning, previewing, etc.). Based on the findings, some recommendations were listed.
Keywords: higher and lower order thinking, Unlock English textbooks, Bloom's Taxonomy

1. Introduction

The recent trends in education have been poured on developing the individuals' potentiality and skills in different subjects and disciplines. Thinking skills can be considered one of the demanded skills that are highly required to facilitate learner's life with the explosion of information, where their memories are not be able to bear the tremendous amount of knowledge and digits. Although knowledge tends to be the utmost outcome of education, that supports students to deal with the changes in the 21st century, there are other cognitive skills and competences that need to be enhanced in different levels, particularly the higher order thinking skills.

Nowadays, education is required to move students further than recalling information and memorization. That is because the information and facts are increasing dramatically, thus students will not be able to compete in this world if they are not able to understand, analyze, apply, evaluate and create (Crossland,2015). These different levels of the cognitive skills are divided into two levels; the lower level thinking skills (LOTS) and the higher order thinking skills based on Bloom's Taxonomy (1965), which was named after Benjamin Bloom, who had suggested the different levels of the cognitive skills as educational objectives in the teaching learning process.

Based on the different levels of the cognitive skills, the educational reformers are calling for enhancing the higher order thinking skills. This enhancement is meant for leading students to be more critical and creative; in a way they can use the content of knowledge in a thorough comprehension which may assist them to research information, analyze, evaluate and to be critical and creative in responding to questions and in solving their problems (Rahman & Manaf, 2017). Therefore, the inclusion of the higher order thinking skills (HOTS) in education

has become one the reforms steps that has been conducted to develop students critical and creative thinking (Shaheen,2010). One of the educational instruments and factors that needs to be adapted and reviewed accordingly is textbooks as they are the vehicle that should reflect the philosophy of education in different disciplines and subjects, such as English language (Assaly & Samadi,2015).

English textbooks, for example, which are designed on skills, are considered to be rich source of materials and content that may reflect the HOTS and LOTS, as they tend to be rich of the reading passages and writing tasks. Thus, teachers and practitioners need to address the different cognitive thinking skills particularly the HOTS, since students are in need not just for recalling information, rather than being able to apply, analyze, synthesize and evaluate (Case,2013). As long as most English textbooks are published by English native countries, like Britain, these textbooks could be established based on criteria that may not fit students' level who learn English as a foreign language in other countries.

Therefore, conducting a review and analysis of the content of English textbooks and syllabi may be an essential step that practitioners and teachers should be aware of. It is important to mention that content analysis is considered to be a research systematic and objective technique and method that can be used in analyzing the content quantitatively or qualitatively. In this analysis, the researcher determines the frequency of specific themes, terms, and other characteristics in order to explain any form of communication messages explicitly or implicitly (Holsti,1969).

1.1 Statement of the Problem

Actually, Unlock English textbooks by Cambridge University Press are the official textbooks that are being used at BZU, in Palestine. This series of books have been adopted for teaching in the academic year 2016/2017. However, this year (2019/2020), Cambridge University Press has published the second edition of the Unlock English textbooks series with having some modifications. One of these changes that has been added is the title that it has become: "Unlock English, Reading, Writing and Critical Thinking". As long as this series of English textbooks is developed by English native countries, like Britain, conducting a review and an analysis of the content of these syllabi may be an essential step in order to evaluate these new textbooks and to compare them with the previous textbooks in terms of the enhancement of the critical thinking skills. As an instructor of English language at BZU, the researcher has conducted this study on one level of these series (Unlock English, Reading, Writing book 3) (B1) and compared it with the previous edition.

1.2 Purpose of the Study

This study aims at investigating to what extent Unlock English textbooks (reading and writing) can enhance the higher order thinking skills in the new and old editions, by analyzing the frequency of the lower and higher thinking learning objectives, based on Bloom's Taxonomy division of the cognitive skills.

1.3 Research Questions

This study is conducted to answer the following questions:

1. To what extent does *Unlock English textbook* enhance the higher and lower order thinking skills (HOTS and LOTS)?

2. What are the differences between the first and the second edition of Unlock English textbooks in terms of the cognitive level of the learning objectives (HOTS and LOTS)?

1.4 The Significance of the Study

This study is considered to be the first evaluation and review of the second edition of the Unlock English series by one of the practitioners at Birzeit University (the researcher) who is working as an instructor of English. This step tends to beneficial for all stakeholders, since this study may resemble a compass to guide other efforts to evaluate other aspects of this textbook. This study is also essential for instructors of English since it will be an acknowledgment of the importance of the different levels of cognitive skills, especially HOTS. Besides, the current study, in cooperation with other research effort, may provide decision makers at Birzeit University with data that they may rely on in their future decision.

1.5 Delimitations

The scope of the content analysis of this study will be the intermediate Unlock English Reading, Writing and Critical Thinking Skills, Book3. This second version was published at the beginning of the academic year 2019/2020. The analysis will include also the previous version of the same intermediate English book, which was entitled Unlock English Reading and Writing Book 3.

1.6 The Definitions of Terminologies

- **Blooms' Taxonomy:** Operationally, the bloom's taxonomy, that this analysis was built on, refers to merging the cognitive thinking skills that was listed by Bloom (1965) and the modified taxonomy by Krathwohl (2002), which were summarized in OPAR (2012). This combination was used as a checklist in this analysis (see Appendix).

- **Higher Order Thinking Skills:** In this study, the higher order thinking skills that were adopted, based on Bloom's taxonomy, are evaluation, analysis, and synthesis.

- **Lower Order Thinking Skills:** the lower thinking skills were defined in this study as the knowledge (memorization), comprehension, and application.

- **Unlock English Textbooks:** This study targets Unlock English Reading, Writing and Critical Thinking, book 3. This book is classified as an intermediate level, where students at this level should be having a good base in English language.

2.Literature Review

2.1 Bloom's Taxonomy

Bloom's Taxonomy was devised by Benjamin Bloom and group of educators in 1965. This taxonomy, since after, has been adopted as the backbone of the teaching process; particularly the learning objectives, the lesson plans and the assessment. In Blooms Taxonomy, the educational objectives were divided into three main categories; cognitive, affective and psychomotor skills. As for the cognitive skills, there are six levels of Bloom's Taxonomy which

are: knowledge, comprehension, application, analysis, synthesis, and evaluation. From the first level, learners can move to a more high and complex level than the other (Bloom,1965). It is worth mentioning that this taxonomy has been revised later by Krathwohl (2002), which was entitle a Taxonomy for Teaching, Learning, and Assessment. In this revised version, the categories of the cognitive skills have become remembering, understanding, applying, analyzing, evaluating and creating.

As for the six levels of Bloom's taxonomy, there are certain characteristics for each level, Knowledge, for example, is the level of thinking that may elicit gaining and memorizing information. Comprehension level, however, involves understating the information and interpret facts. As for the Application level, students are being asked to apply and use the information they gained. Besides, at the Analysis phase learners are supposed to analyze, investigate and infer. At Synthesis level, moreover, learners are required to induct theories, predictions, and evaluation. That is why, learners at this level can come up with conclusions and become more critical and creative (Bloom,1965). These different levels where divided in two levels; LOTS and HOTS.

2.2 The Importance of Teaching Higher Order Thinking Skills (HOTS).

The reform in education involves being updated to the skills that learners are in need to cope with the demands of the 21st century. These demands include innovation, life and career skills and technology skills. Importantly, such demands require learners to have an acceptable level of communication, collaboration critical thinking and creativity besides other skills. Thus, Rentawati et al (2018) stated that that the 21st-century skills can be divided into two main categories; abstract and concrete skills. It is worth mentioning that higher order thinking skills belong to the abstract skills, whereas communication and collaboration are concrete. Moreover, creative thinking skills and critical thinking skills are tied up with enhancement of the higher-order thinking skills (HOTS).

It is important to mention that Bloom's different levels of skills were divided by researchers into higher (HOTS) and lower thinking skills (LOTS). The commitment towards HOTS came in line with the development of information and technology, where learners are in need for different competences to cope with the huge amount of information, such as analysis, synthesis and evaluation (Halili,2015). Some researchers also believe that HOTS tend to be essential in developing lifelong learning, that enables learners to respond effectively to the 21st century demands (Rentawati et al, 2018). Although much of research effort is in favor improving teaching and learning HOTS, there are challenges that confront this goal starting from the curriculum, moving to the classroom practices and ending up with assessment (Zohar, 2003).

2.3 HOTS and LOTS in English Textbooks

The textbooks in general are set to be a fundamental part in the teaching and learning process. Richards (2001), for example, has listed 7 advantages of the English textbooks. These benefits were summarized as they provide a thorough description of the structure and the program. They also suggest standardized instruction, as well as they can improve and enhance the quality of the learning process, with offering learning resources. Moreover, English textbooks can facilitate second language learning, and they also submit effective language model and input, and can be considered as initial training for teachers.

Therefore, content analysis of textbooks and curriculum are so vital in order to provide basis for policy decisions and the implementation. This means that textbooks are an important

component in any ESL/EFL course, so the careful selection of English textbooks is a key element in any successful teaching and learning program. In other words, the content of the textbook should meet the desired skills and expectation that are suitable for the context of learning. In a sense, the selection of any ESL/EFL textbook should be followed by a review of the content to analyze the main domains, since they are considered to be a learning teaching instrument, that support teaching (Gul, Shah &Sultan, 2015).

A number of studies have been conducted to investigate the type and the cognitive level of the textbooks' questions in different subjects and different countries around the world using Bloom's taxonomy as a guide for categorizing the questions. Razmjoo and Kazempourfard (2012) have analyzed the activities and the exercises of three units of four books of the *Interchange series* using the six levels of Bloom's Revised Taxonomy. The researchers employed a coding scheme to code, classify and analyze the exercises and activities of these books. The findings of this study revealed that the lower order cognitive skills were dominant in Interchange *textbooks*, that remembering was the most frequent category followed by applying in the four books.

In the same context, Shafeei et al (2017) have conducted a study that aimed at investigating the questions types used by teachers of English. It aimed also at examining the challenges that are faced by teachers in incorporating HOTS elements in their teaching. The study concluded that ESL teachers tended to address questions that arouse LOTS compared to HOTS. The researcher further referred this result to the lack of knowledge regarding HOTS questions, thus this is reflected by the students' English low proficiency level.

In a study conducted by Nachiappan et al (2018), the researchers aimed at documenting the application of Higher Order Thinking Skills (HOTS) in teaching and learning through component in preschool. The study concluded that there are only three levels of Higher Order thinking skills which are the application, analysis and evaluation in teaching and learning.

3. Methodology and Procedures

The current study is a quantitative and qualitative content analysis research that was established to answer the research main questions; To what extent does *Unlock English textbook* enhance the Higher order thinking skills (LOTS)?; and what are the differences between the first and the second edition of *Unlock English textbooks* in terms of the cognitive level of the learning objectives (HOTS and LOTS)?

3.1 Sampling

This study was established to document the cognitive level of the learning objectives of Unlock English Reading, Writing and Critical Thinking book 3, (First and Second Edition) by Cambridge University Press. Choosing this book was purposefully since the majority of students at BZU are usually supposed to cover this course and pass this level.

3.2 Instrument of the Study

In order to analyze the cognitive level of the learning objectives of the target textbook, the researcher has used a checklist designed based on Bloom's Taxonomy (1965) and the Revised Taxonomy by Krathwohl (2002). The content of the checklist contains all the possible verbs that may locate under the different levels of the cognitive skills prepared by OPAR (2012) (see

Appendix 2).

3.2.1 Validity of the Checklist

Bloom's Taxonomy has been validated in many studies, it was also used to determine the educational objectives, activities, and assessment. Thus, following the levels and the categories suggested by Bloom (1965) was validated in several research papers (Assaly & Smadi,2015). As for the validity of the checklist used in the current study, the checklist has specified all Bloom's Taxonomy levels based on words and certain verbs for each level (OPAR,2012). Thus, the researcher has analyzed the level of each learning objective of the all activities based on a ready-made checklist that was validated by being exposed to 4 experts who confirmed its validity.

3.2.2 Reliability of the Checklist

As for the reliability, the instrument or the collecting data checklist was quantitative-based, which means that it depends on recording the units' activities and learning objectives in a quantitative procedure to determine the frequencies of the cognitive level of learning objectives. In order to confirm the reliable results, the inter-rater reliability was conducted by asking two raters to analyze four units and compared it with the researchers' results, to measure the consistency in the results.

3.3 Data Collection

The researcher analyzed Unlock English Reading, Writing and Critical Thinking, book 3 (Intermediate Level) (First and Second Editions) by dividing each unit into five main parts, the video, reading1, reading2, critical thinking and writing, then the researcher counted the number of the learning objectives of each activity that were listed in the margin of each page. After that, such objectives were coded and categorized according to Bloom's levels to document the presence of the thinking skills levels (HOTS and LOTS) in both books.

3.4 Data Analysis

In analyzing the Unlock Reading, Writing and Critical Thinking textbooks (1st and 2nd Editions), the activities in videos, reading passages, critical thinking and writing tasks sections were used. The activities and tasks were divided into subskills, which were categorized based on their cognitive level according to Bloom's Taxonomy. After that, the frequencies of each cognitive skill were calculated in the whole book (eight/ten units of each book), to rank them later into higher order thinking skills (HOTS) and lower order thinking skills (LOTS) to answer the research main question (Cresswell,2014). Besides, a comparison between the HOTS and LOTS in the first and second editions was held.

4. Results and Analysis

To answer the main questions, the first and the second editions of Unlock Reading, Writing and Critical Thinking Skill book 3 were analyzed. This analysis included 10 units in the first edition and 8 units in the new textbook. The analysis was conducted based on the activities and the learning objectives of the five main sections: the videos, reading1, reading 2, critical thinking and writing task. The units in these textbooks can be categorized as shows in table 1 and 2:

Table 1: *The Included Units and the Number of learning objectives in Unlock Reading, Writing and Critical Thinking Skill book3, Second Edition*.

Unit	Title	Number of cognitive learning objectives
1	Animals	14
2	Environment	12
3	Transport	13
4	Customs and Traditions	13
5	Health and Fitness	14
6	Discovery and Inventions	12
7	Fashion	13
8	Economics	14
Total	8 units	105

In other words, Unlock English textbook 3, second edition, consists of (8) thematic units, where it implies (105) learning objectives divided into units, each unit has between 12-14 learning objective. On the other hand, Unlock English textbook 3, first edition consisted of 10 thematic units, which means that two units (3 and 10) were crossed out from the new edition. The cognitive objectives ranged between 9-11 objective as has been shown in Table 2 below.

Table 2*: The Included Units and the Number of learning objectives in Unlock Reading, Writing and Critical Thinking Skill book3, First Edition.*

Unit	Title	Number of cognitive learning objectives
1	Animals	10
2	Transport	11
3	History	…..
4	Customs and Traditions	10
5	Environment	10
6	Health and Fitness	11
7	Discovery and Inventions	9
8	Fashion	9
9	Economics	10
10	Brain	…..
Total	10 units	80

4.1 The Results Related to the First Question

To what extent does *Unlock English textbook* enhance the Higher order thinking skills (LOTS)? Upon a close analysis, the analyzed cognitive objectives were divided into units and sections as displayed in table3.

Table 3: *The level and Frequencies of the Cognitive Learning Objectives in Unlock Textbook, book 3, Second Edition.*

Units	Videos	Reading 1	Reading 2	Critical Thinking	Writing Task
Animals (Unit 1)	2: Comprehension (Predict, Understanding main ideas)	1: Comprehension (Understanding Vocabulary) 1: Application (Using your Knowledge) 1: Analysis (Working out meaning from context)	2: Comprehension (Understanding Vocabulary, predict,) 1: Analysis (summarize) 2: Synthesis (making inferences)	1: Analysis (analyze) 1: Application (apply)	1: Application (plan) 1: Synthesis (write)
Environment (Unit 2)	2: Comprehension (Predict, Understanding main ideas)	2: Comprehension (Understanding Vocabulary. Predict) 1: Analysis (Identify)	1: Comprehension (understanding) 3: Synthesis (summarize, making inferences, discuss)	1: Analysis (analyze)	1: Application (plan) 1: Synthesis (write)
Transport (Unit 3)	2: Comprehension (Predict, Understanding main ideas)	2: Comprehension (Understanding Vocabulary, predict) 1: Analysis (making inferences)	2 : Comprehension (understand, predict) 2: Analysis (making inferences, discuss)	1: Evaluation (evaluate) 1: Analysis (analyze)	1: Application (plan) 1: Synthesis (write)
Customs and Traditions (Unit 4)	2: Comprehension (Predict, Understanding main ideas)	2: Comprehension (Understanding Vocabulary, predict) 1: Analysis (making inferences)	2: Comprehension 1: Analysis 1: Synthesis	1: Synthesis (summarize) 1: Evaluation (evaluate)	1: Application (plan) 1: Synthesis (write)
Health and Fitness (Unit 5)	2: Comprehension (Predict, Understanding main ideas)	2: Comprehension (Understanding Vocabulary, predict) 1: Analysis (making inferences)	1: Comprehension (understanding) 3:Synthesis (annotating, making inferences, discuss).	2: Knowledge (remember) 1: Comprehension (understand) 1: Analysis (analyze)	1: Application (plan) 1: Synthesis (write)

Discovery and Inventions (Unit 6)	2: Comprehension (Predict, Understanding main ideas)	1: Comprehension (Understanding Vocabulary) 1: Synthesis (annotating) 1: Analysis (making inferences)	1: Comprehension (Understanding Vocabulary) 2: Analysis (summarize, making inferences) 1: Synthesis (discuss).	1: Analysis (analyze)	1: Application (plan) 1: Synthesis (write)
Fashion (Unit 7)	2: Comprehension (Predict, Understanding main ideas)	1: Comprehension (Understanding Vocabulary) 1: Synthesis (annotating) 1: Analysis (making inferences)	3: Comprehension (understanding vocabulary, predict, distinguish) 1: Synthesis (discuss)	1: comprehension (identify) 1: Evaluation (evaluate)	1: Application (plan) 1: Synthesis (write)
Economics (Unit 8)	2: Comprehension (Predict, Understanding main ideas)	2: Comprehension (Understanding Vocabulary, predict) 1: Analysis (making inferences)	2: comprehension ((understanding vocabulary, predict) 1: analysis (making inferences) 2: Synthesis (annotating, discuss).	1: Comprehension (understanding) 1: Analysis (analyze)	1: Application (plan) 1: Synthesis (write)

In Table 4, the number of cognitive objectives in Unlock English textbook, second edition, were counted and analyzed, then divided between units. It is worth mentioning that these objectives were also categorized based on Bloom's Taxonomy using OPAR (2012) classification of verbs. The Percentages of the cognitive objectives were also listed in table 4 below.

Table 4: *The percentages of the Cognitive Level of the Learning Objectives in Unlock Textbook, book 3.*

Cognitive Level	**Unit 1**	**Unit 2**	**Unit 3**	**Unit 4**	**Unit 5**	**Unit 6**	**Unit 7**	**Unit 8**	**Percentage (105)**
Knowledge	0	0	0	0	1	0	0	0	1%
Comprehension	5	5	6	6	6	4	7	7	43.8 %
Application	3	1	1	1	1	1	1	1	9.5 %

Analysis	3	2	4	2	2	4	1	3	20 %
Synthesis	3	4	1	3	4	3	3	3	22.8%
Evaluation	0	0	1	1	0	0	1	0	2.8 %
Total	14	12	13	13	13	12	13	14	105

As it shows in Table 4, the percentages of the cognitive objectives division are presented. This table displays that the majority of the learning objectives belongs to the "Comprehension" level, where 48.3% of the activities were categorized under "Comprehension" level. However, almost the quarter of the learning objectives (23 %) are from "Synthesis " level and almost same percentage (20%) was for the Analysis level. 10% of the learning objectives were only for application (writing), and 3 % was for evaluation.

4.2 The Results Related to the Second Question

As for the second question, "What are the differences between the first and the second edition of Unlock English textbooks in terms of the cognitive level of the learning objectives (HOTS and LOTS)?", Table 5 shows the percentages of the cognitive skills in the first edition in *Unlock English textbook 3* were also classified using the same checklist, as shown below.

Table 5: *The Percentages of the Cognitive Level of the Learning Objectives in Unlock Textbook, book 3, First Edition*.

Cognitive Level	**Unit 1**	**Unit 2**	**Unit 3**	**Unit 4**	**Unit 5**	**Unit 6**	**Unit 7**	**Unit 8**	**Unit 9**	**Unit 10**	**Percentage (105)**
Knowledge	0	0	….	0	0	0	1	0	0	…..	1 %
Comprehension	4	5	….	4	5	5	5	5	5	….	45.2 %
Application	1	2	…	2	2	2	1	1	1	….	14.2%
Analysis	4	3	…	4	3	4	2	3	4	….	32 %
Synthesis	0	1	…	0	0	0	0	3	0	….	4.7%
Evaluation	1	0	…	0	0	0	1	0	0	….	2.3%
Total	10	11	…	10	10	11	10	12	10		84

Based on Table 5, the results reveal that almost half of the cognitive objectives (45.2%) belong to the " Comprehension" level. The third of these analyzed objectives (32%) belong to the "Analysis" rank. The presentence of the "Application" objectives comes next (14%), whereas the least of these objectives are categorized under Synthesis (5%) Knowledge, (1%), and Evaluation (1%).

5. Discussion

During this investigation, the importance of addressing higher order thinking skills in teaching English language was demonstrated in literature. This importance was reflected by the interest in testing and analyzing different contents and textbooks based on Bloom's Taxonomy, to evaluate and induct some principles that may help stakeholders and policy makers in making decisions. Based on the inquiry that was held from the early beginning in the current study, the two questions that have guided this study need to be discussed.

As for the first question, it addressed the presence, frequencies and percentages of HOTS and LOTS in Unlock English Textbook3, second edition. The results revealed that half of the cognitive objectives belong to "Comprehension", which can be categorized as a lower order thinking skill. This result is justified since this was explained by Bloom (1965), who insisted on addressing both LOTS and HOTS, since this is a foreign language, and the content of the instructional materials should address some basic elements that students need in order to be scaffold in their language learning process. It is important to mention that almost the second half of analyzed cognitive objectives was ranked under "Analysis" and "Synthesis" which are two higher order thinking skills. This may lead to a conclusion that majority of the cognitive objectives belong to both LOTS (Comprehension) and HOTS (Analysis and Synthesis).

In terms of the second Question, a comparison between the levels of the cognitive objectives was conducted. It is worth mentioning that the two Unlock English textbooks contain different numbers of units and different numbers of cognitive objectives. As it has been shown previously, the second edition contains 8 thematic units, where the first edition contained 10 units. Therefore, in this analysis, the researcher has excluded the two units that were crossed out from the second edition. In other words, the number of the cognitive objectives in the two editions varied, that they were 84 objectives in the first edition, but they are 105 in the second edition.

Related to the similarities and differences between the two textbooks in terms of HOTS and LOTS, the results revealed that the majority of the cognitive objectives were ranked in comprehension and analysis only. Whereas, this division was different in the second edition, that the synthesis level of cognitive objectives has increased, besides the comprehension level of cognitive objectives has not changed. This result indicates that in the second edition another higher order thinking skill was enhanced "Synthesis" to form with the "Analysis" level almost half of these cognitive objectives.

Moreover, in the context of comparing the first and the second edition, the results have shown that some objectives have been modified to fit the "Critical Thinking" title. In other words, some objectives were mainly language objectives, such as Previewing, Skimming and understanding the main ideas. However, in the second edition, these objectives have been changed into other forms, such as Predicting the Content Using Visuals. This means that some objectives were paraphrased to reflect the cognitive objectives, where they were more related to reading comprehension sub-skills (skimming, scanning, previewing…etc).

6. Conclusion and Recommendation

This investigation was content analysis research effort that aimed at measuring to what extent *Unlock English textbooks* (first and second editions) do enhance higher and lower order thinking skills. Besides, it aimed at listing the differences between the second and the first edition of the same textbooks as an ongoing evaluation so as to spot the differences between the two versions. The checklist, that has been used as an instrument in this process, was built on Bloom's taxonomy, in which the frequency of the cognitive learning objectives were counted, coded and analyzed. Accordingly, some conclusions were listed that the majority of the cognitive learning objectives, in the *Unlock English textbooks* second edition, belong to comprehension, analysis and synthesis. However, the majority of the same objectives in the first edition were mainly comprehension and analysis. This means that the new version has been supported with more objectives that enhance synthesis in comparison with the previous one. In addition to this, other differences were spotted and listed between the two versions, to lead to some recommendations. Although this paper can conclude that Unlock textbooks do enhance both HOTS and LOTS, it is recommended to conduct a further research to cover the whole series of Unlock textbooks for all levels. Moreover, analyzing textbooks are supposed to be followed with ongoing evaluative studies of the teachers' and practitioners' practices in their teaching in order to measure to what extent these skills are being addressed inside classrooms.

7. Conflict of Interests

The authors declare that there is no conflict of interest.

8. Ethics Committee Approval

The authors confirm that ethics committee approval was obtained from Yarmouk University (March, 2020).

References

Anderson L. W. and Krathwohl, D. R. ed. (2000) *A taxonomy for learning, teaching, and assessing – a revision of Bloom's Taxonomy of educational objectives*. London: Pearson.

Assaly, I., & Smadi, O., (2015). Using Bloom's Taxonomy to Evaluate the Cognitive Levels of Master Class Textbook's Questions. *Canadian Center of Science and Education*, 8 (5).

Bloom, B., Englehart, M., Furst, E., Hill, W., & Krathwohl, D. (1956). *Taxonomy of Educational Objectives: The Classification of Educational Goals*. Handbook I: Cognitive domain. New York: Longman.

Case, R., (2013).The Unfortunate Consequences of Bloom's Taxonomy. *Social Education* 77(4), 196–200.

Creswell, J. W. (2014). *Educational Research: Planning, Conducting and Evaluating Quantitative and Qualitative Research* (4th ed.). Harlow: Pearson.

Crossland, J., (2015). Thinking Skills and Bloom's Taxonomy. *Primary Science, 32-34.*

Gul, F., Shah, S., Sultan, H., (2015). Textbook Analysis and Evaluation of 7th and 8th Grade in Pakistani Context. *International Journal of English Language Teaching*, 3 (4), 79-97.

Krathwohl, D. R. (2002). A Revision of Bloom's Taxonomy: An overview. Theory into Practice, 41(4), 212-219 .

Nachiappan, S., Damahuri, A. A., Ganaprakasam, C., & Suffian, S. (2018). "Application Of Higher Order Thinking Skills (Hots) In Teaching And Learning Through Communication Component And Spiritual , Attitudes And Values Component In Preschool". Faculty of Human Development , Sultan Idris Education University.

Holsti, O.R. (1969). Content Analysis for the Social Sciences and Humanities. Reading, MA: Addison-Wesley.

Rahman, Sh., & Manaf, F., (2017). A Critical Analysis of Bloom's Taxonomy in Teaching Creative and Critical Thinking Skills in Malaysia through English Literature. *English Language Teaching*, 10 (9). pp. 245-256.

Razmjoo, S., & Kazempourfard, E. (2012). On the representation of Bloom's Revised Taxonomy in Interchange Coursebooks. The Journal of Teaching Language Skills (JTLS), 4(1), 171-204.

Rentawati, H., Djidu, H., Apino, K., Anazifa, R., (2018). Teachers' Knowledge About Higher-Order Thinking Skills and Its Learning Strategy. *Problems of Education in 21st Century,* 76 (2).

Richards, J.C. (2001). Curriculum development in language teaching. Cambridge: Cambridge University Press.

Shafeei, KH., Hasan, Ismali, F., Aziz, A., (2017). Incorporating Higher Order Thinking Skill (HOTS) Questions in ESL Classroom Contexts. *International Journal*, 4 (1), pp: 101–116.

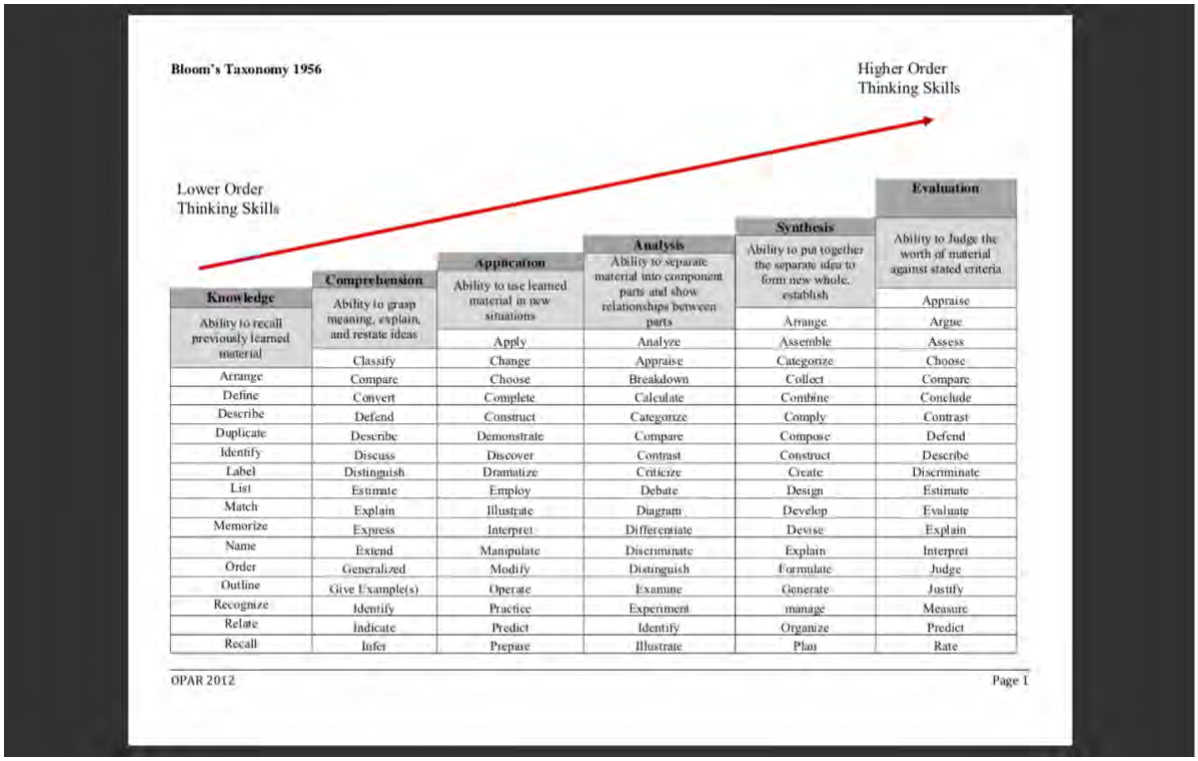
Shaheen, R., (2010). Creative Education. School of Education. *Creative Education*. 2.1, (3), 166-169.

Yen, T. S., & Halili, S. H. (2015). Effective Teaching of Higher Order Thinking (HOT) in Education. *The Online Journal of Distance Education and e-Learning*, 3, 41-47.

Zohar, A., & Dori, Y. J. (2003). Higher order thinking skills and low-achieving students: Are they mutually exclusive? The Journal of the Learning Sciences, 12(2), 145-181.

Appendices

Appendix A: Bloom's Taxonomy by OPAR (2012) tables.



Bloom's Taxonomy 1956

Higher Order Thinking Skills

Lower Order Thinking Skills

Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
Ability to recall previously learned material	Ability to grasp meaning, explain, and restate ideas	Ability to use learned material in new situations	Ability to separate material into component parts and show relationships between parts	Ability to put together the separate idea to form new whole, establish	Ability to Judge the worth of material against stated criteria
Arrange	Classify	Apply	Analyze	Arrange	Appraise
Define	Compare	Change	Appraise	Assemble	Argue
Describe	Convert	Choose	Breakdown	Categorize	Assess
Duplicate	Defend	Complete	Calculate	Collect	Choose
Identify	Describe	Construct	Categorize	Combine	Compare
Label	Discuss	Demonstrate	Compare	Comply	Conclude
List	Distinguish	Discover	Contrast	Compose	Contrast
Match	Estimate	Dramatize	Criticize	Construct	Defend
Memorize	Explain	Employ	Debate	Create	Describe
Name	Express	Illustrate	Diagram	Design	Discriminate
Order	Extend	Interpret	Differentiate	Develop	Estimate
Outline	Generalized	Manipulate	Discriminate	Devise	Evaluate
Recognize	Give Example(s)	Modify	Distinguish	Explain	Explain
Relate	Identify	Operate	Examine	Formulate	Interpret
Recall	Indicate	Practice	Experiment	Generate	Judge
	Infer	Predict	Identify	manage	Justify
		Prepare	Illustrate	Organize	Measure
				Plan	Predict
					Rate

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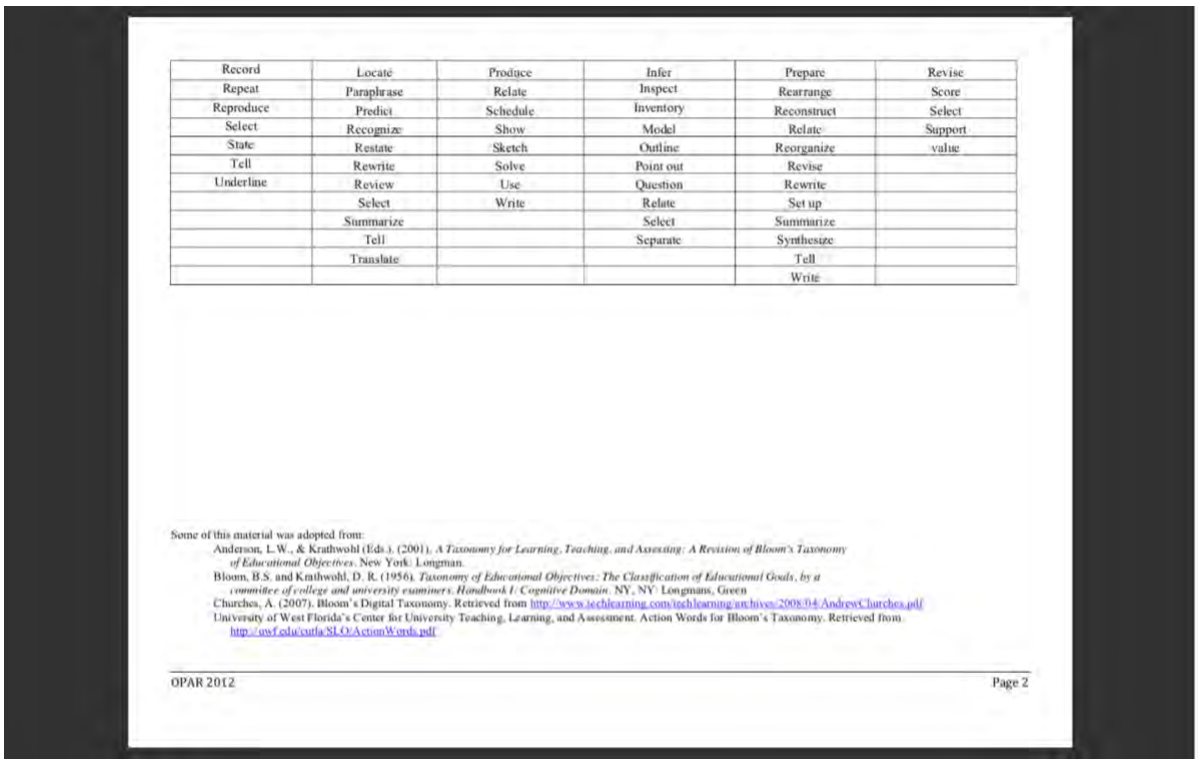

Record	Locate	Produce	Infer	Prepare	Revise
Repeat	Paraphrase	Relate	Inspect	Rearrange	Score
Reproduce	Predict	Schedule	Inventory	Reconstruct	Select
Select	Recognize	Show	Model	Relate	Support
State	Restate	Sketch	Outline	Reorganize	value
Tell	Rewrite	Solve	Point out	Revise	
Underline	Review	Use	Question	Rewrite	
	Select	Write	Relate	Set up	
	Summarize		Select	Summarize	
	Tell		Separate	Synthesize	
	Translate			Tell	
				Write	

Some of this material was adopted from:

Anderson, L.W., & Krathwohl (Eds.). (2001). *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives*. New York: Longman.

Bloom, B.S. and Krathwohl, D. R. (1956). *Taxonomy of Educational Objectives: The Classification of Educational Goals, by a committee of college and university examiners. Handbook I: Cognitive Domain*. NY, NY: Longmans, Green

Churches, A. (2007). Bloom's Digital Taxonomy. Retrieved from http://www.techlearning.com/techlearning/archives/2008/04/AndrewChurches.pdf/

University of West Florida's Center for University Teaching, Learning, and Assessment. Action Words for Bloom's Taxonomy. Retrieved from http://uwf.edu/cutla/SLO/ActionWords.pdf

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