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*Analyzing English Textbook Questions for the
Elementary Eighth Grade in Palestine Based on
Bloom's Taxonomy of Educational Goals at Its
Cognitive Domain*

Submitted by

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Submitted in partial fulfillment of the requirements for the
degree of Master of Education

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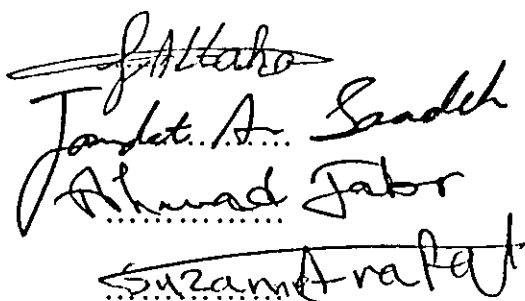
2000

This thesis was defended on November 5, 2000 and approved by

Committee Members

1. Dr. Fawaz Aqel
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3. Dr. Ahmad Fahim Jaber
4. Dr. Suzan Arafat

Signature


The image shows four handwritten signatures in black ink, corresponding to the committee members listed on the left. The signatures are: 1. Fawaz Aqel, 2. Jawdat Ahmad Saadeh, 3. Ahmad Fahim Jaber, and 4. Suzan Arafat.

*To My Parents, Mohammad,
Muna and Nihad*

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I owe many thanks to all those who helped me in making this work possible.

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Lastly, to my husband and family, I owe the most special thanks for their support and encouragement.

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ABSTRACT

As higher level cognitive tasks are reflected in the kinds of questions presented to students in their textbooks (Franklin, 1981), this study has been directed to evaluate the instructional questions, in the Eighth Grade English Textbooks used in Palestine during the academic year 1999-2000 via Bloom's Taxonomy, to find out to which degree it developed higher thinking skills.

Bloom's Taxonomy divides the way people learn into three major domains. These are effective, psychmotor and the cognitive domains. The cognitive domain is further divided into categories or levels. These are arranged in a hierarchically ordered classification system, starting from knowledge and comprehension (as lower level categories) to application, analysis, synthesis and evaluation (as higher level categories)(Bloom, 1956).

This study is the first in the field of TEFL to be conducted at a Palestinian university (to the best of knowledge of the researcher). In addition to this, its importance comes from being an assessment of the educational role of a textbook in improving the higher thinking skills of the students.

Questions presented in the student textbook, workbook and the stories were analyzed and compared according to Bloom's Taxonomy method. An analysis sheet was prepared for this purpose. Key words, cited in appendix 2, were used as criteria in the classification of the questions according to the requested taxonomy. Number of questions, per each cognitive level, was computed. Lower and higher level question groups were calculated. Frequencies and percentages were tabulated and represented by bar graphs to facilitate the analysis of the results.

The results of the study revealed that there was still a preponderance of lower level questions in the studied textbooks.

The researcher recommended that more studies be conducted on English Petra textbooks for the other grades. She also recommended that the Palestinian curriculum designers improve their questioning techniques in the new Palestinian curricula.

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Chapter One

Introduction

In this chapter the researcher presents the research statement, purpose of the study, the research questions, the significance of study, the definition of terms and limitations of the study.

The educational process is traditionally composed of three main elements: the teacher, the student and the curriculum especially the textbook. Many studies have showed that the textbook is the core of the educational process (Chinoda, 1982).

Seif (1994) argued that textbook is a synonym for curriculum and it is the student's guide which supplies him with information and nourishes his mind with knowledge. He also found that 90% of the students depended on the textbook and spent 90% of their time on studying it.

In the light of this information, and because the textbook is considered a main source of knowledge students use, the instructional process designers should pay more attention to the shaping of the textbook. They should introduce in textbooks different skills to improve the students' ability of critical thinking, decision making and analytical reasoning.

One way of improving the students' higher thinking skills, through the textbooks, is through the questions presented in them (Franklin, 1981). Wixson (as cited in Rawadieh, 1998) believed that questions falling within the high levels of thinking would develop the students' higher thinking skills.

In 1956 Bloom et al published their the then new widely accepted taxonomy for classifying objectives and assessment items for the cognitive domain. Their system specified six levels of understanding and each higher level would subsume the properties of the lower levels. The levels of the taxonomy were from the lowest to the highest, (knowledge, comprehension, application, analysis, synthesis, and evaluation).

Typically, student's achievement and higher thinking skills are assessed by using different forms of questions or tests. Unfortunately, most items used in these assessments address levels of knowing and thinking not typically associated with higher thinking skills. Many researchers (Abaya,1993; Hoeppe1,1980 ; Humblen,1984) found that the objective test items , used at all levels of education , overwhelmingly tapped the lower levels (knowledge, comprehension) of the Bloom's Taxonomy. That is, if the test items used only required lower-level thinking skills, students would not develop and use their higher-order skills even if instructional methods employing these skills were implemented.

In the light of the aforesaid, the researcher analyzed the questions presented in the English Petra textbooks for the eighth grade in Palestine. The questions were classified according to the cognitive domain levels of Bloom's Taxonomy. This revealed to which degree the textbook questions may encourage the lower and higher order thinking skills.

Research Statement

During the 1960s, researchers in social studies education called for extensive curriculum reform as several studies found that textbooks had usually concentrated on lower level questions. Those questions developed memorization rather than the ability of higher level thinking (Franklin, 1981).

Benjamin Bloom and his colleagues (1956) created the taxonomy of the cognitive domain. Bloom suggested in his taxonomy that questions in textbooks should tend to develop the student's abilities of higher thinking skills (application, analysis, synthesis and evaluation) as well as the lower levels of thinking (knowledge and comprehension).

Thus, the researcher aimed at analyzing the eighth grade English textbook questions and classifying them according to Bloom's Taxonomy to find out to which degree the questions covered the six levels of the taxonomy.

Purpose of the Study

This study aimed at:

1. Determining the percentage of each level of the cognitive domain in the curriculum content in the eighth grade English textbooks;
2. Determining the percentages of both the lower and the higher level questions presented in the eighth grade English textbooks.
3. Determining the significant difference at (.05) among Bloom's Taxonomy of Educational Objectives in the English student book for the eighth grade.
4. Determining the significant difference at (.05) among Bloom's Taxonomy of Educational Objectives in the English workbook for the eighth grade.

Research Questions

This study has raised the following four questions:

1. What is the percentage given to each level of the cognitive domain in the eighth grade English textbooks?
2. What are the percentages given to the lower-level questions and higher-level questions in the eighth grade English textbooks?
3. Are there any significant differences at (.05) among Bloom's Taxonomy of Educational Objectives in the English student book for the eighth grade?
4. Are there any significant differences at (.05) among Bloom's Taxonomy of Educational Objectives in the English workbook for the eighth grade?

Significance of the Study :

Higher thinking skills are vital, essential and necessary in all life aspects, and without them, students will not get the ability of analytical reasoning, synthesis, problem solving or higher mental processes by which they can become effective citizens in their country. Thus, the knowledge given to the students by the textbooks should provide them with high thinking skills, which can be obtained by introducing in the textbooks, different higher level questions. The researcher has chosen to analyze the questions specifically for their importance in developing the students' higher thinking skills (Rawadieh, 1998).

Another significance of the study comes from being the first attempt in a Palestinian University to analyze English Petra textbooks for the eighth grade according to Bloom's Taxonomy of Educational Objectives. It is hoped to be of good help to all teachers, researchers and curriculum designers. Palestinian curriculum planners and developers may also find good educational ideas in this study by introducing different levels of questions and activities in their planning of the new Palestinian curriculum and textbooks.

Definition of Terms :

Following are definitions of terms for the purpose of study:

Educational Objectives: Explicit formulations of the ways in which students are expected to be changed by the educational process.

That is, the ways in which they will change in their thinking, their feelings, and their actions (Bloom,1956).

Questions: Investigative statements that appear at the end of chapters in the English textbooks and call on the students for some level of cognitive functioning to provide answers(Longman, 1984).

Bloom's Taxonomy of Educational Objectives: Cognitive Domain: A classification system of six levels: knowledge, comprehension, application, analysis, synthesis and evaluation proposed by Bloom and his colleagues in 1956.

Lower Level Question: A question that requires students to respond at the cognitive level of knowledge or comprehension (Bloom ,1956) .

Higher Level Question: A question that requires students to respond at the cognitive level of application, analysis, synthesis or evaluation (Bloom ,1956) .

Knowledge: Exhibits previously learned material by recalling facts, terms, basic concepts and answers (Bloom ,1956) .

Comprehension: demonstrating, understanding of facts and ideas by organizing, comparing, translating, interpreting, giving descriptions and stating main ideas (Bloom ,1956) .

Application: Solving problems by applying acquired knowledge, facts, techniques and rules in a different way (Bloom ,1956) .

Analysis: Examining and breaking information into parts by identifying motives or causes, making inferences and finding evidence to support generalizations (Bloom ,1956) .

Synthesis: Compiling information together in a different way by combining elements in a new pattern or proposing alternative solution (Bloom ,1956) .

Evaluation: Presenting and defending opinions by making judgments about information, validity of ideas or quality of work based on a set of criteria (Bloom,1956).

Higher Thinking Skills : The ability to make judgments and arrive at conclusions about information or ideas through rules or criteria (Bloom, 1956).

Limitations :

This study was limited to the following:

1. Since there are two different curricula in Palestine, one in the West Bank and the other in Gaza Strip, the researcher has chosen to analyze the English Petra textbook questions for the eighth grade in the West Bank only;
2. Student book, workbook and story questions were all included in the analysis. However, the teacher's book was excluded from the study;
3. Only the cognitive domain of Bloom's Taxonomy was considered;
4. Questions were analyzed according to Bloom's Taxonomy. Other taxonomies were not considered.
5. The significant difference at (.05) was limited to the student textbook and workbook only. The three stories were not considered. Statistically, no Repeated MANOVA values could be obtained because of the high number of the zero values of the questions distributed among levels compared with the small number of

questions. This limitation came after the failing attempts to apply the Repeated MANOVA Test on the stories.

Summary

In this chapter the researcher presented the research statement, the purpose of the study, the research questions and the significance of the study. The researcher also defined the related terms to the study and presented limitations of the study.

Chapter Two

Review of Literature

The promising view of question's role forces us to analyze textbooks in order to know in which way this role is reflected in the texts in reality. Many researchers have studied the questions raised by the textbooks in several subjects and areas. These questions were analyzed and evaluated according to Bloom's Taxonomy. Therefore, this chapter will summarize the literature of previous studies related to this research.

Questions are considered one of the most important components of textbooks. Questions of a textbook aim at activating the students' interest in the subject and directing this interest to the essential points of the subject. In addition, questions help students to think and to realize and thus to formulate their own ideas and views about what they have studied (Wixson, as cited in Rawadieh,1998).

Other questions link the different parts of the textbook by asking the students to make comparisons, estimations or research, etc... The importance of these questions comes from being an accurate indication of student's performance and ability of understanding (Abaya, 1993).

On the other hand, Bloom (1956) argued that not only students need the questions, but also the teachers. Questions are used by the teachers to evaluate their methods of teaching and to improve the efficiency of the educational process.

Questions are divided into two types. The first type asks to provide facts and this includes all questions that could be answered directly from the textbook. The second type requires the use of the facts and this includes all questions of realization, application, sorting, comparison etc... (Bloom, 1956). So questions of the first type depend on memory while those of the second type depend on thinking.

A greater emphasis should be directed towards the second type of questions as well as the first type. This will train the reader to use smart ways of reading and thus achieve the requirement of the core of the educational process: understanding.

It is clear that the textbook questions are considered an important component of the educational textbook. The promising purpose of questions is to open the cultural aspects that will encourage the reader to search for the knowledge and information elsewhere away from the textbook, in addition to its role in sharpening the students' higher thinking skills (AlKhateeb, 1985).

The researcher divided these studies into two major groups.

Studies that examined the cognitive levels of the textbook questions:

Many years before Bloom and his colleagues conducted their theory, Moore (1926) (as cited in Rawadieh,1998) analyzed the geography and history textbook questions. She divided the questions into memory and thought questions. The results indicated that 38.7% were memory questions while 61.3% were thought questions. Moore concluded that the textbooks encouraged thinking rather than memorization.

Ten years after Bloom's Taxonomy became famous, Davis and Hunkins (1966) analyzed questions proposed in three fifth-grade social studies textbooks. They found that 96% of the questions concentrated on the knowledge and comprehension levels and only 4% of the questions were for the other four high cognitive levels.

Two years later, Santos (1968) studied the Philippine basal reading questions . He found them emphasizing the recalling (knowledge) questions in favor of the higher-level cognitive questions.

Using the six categories of Bloom's Taxonomy, Pancella (1971) analyzed forty-one tenth grade biology tests prepared by test bureaus and the biological science curriculum. Of the 2,689 test items classified, 71.88% were knowledge, 15.17% comprehension, 11.49% application, 1.37% analysis, 0.04% synthesis and 0.04% evaluation. The results

showed that questions on the knowledge level of the taxonomy were over-emphasized at the expense of the other level questions .

In a series of studies about fourth, fifth, and sixth social studies textbook, Rogers (1973) analyzed 2,547 questions. He found that questions, categorized within comprehension level, had had a percentage of 41% which was the highest percentage of questions. It was followed by knowledge with 36%, analysis 10%, evaluation 8%, synthesis 3%, and application 2%. Rogers pointed out that there was a trend to increase the question's level as the grade level increased.

The predominance of lower-level questions in textbooks appears to be a worldwide problem. For example, Yasin (1973) analyzed the questions of the science textbook for the first and third preparatory classes in Egypt according to Bloom's Taxonomy. Results indicated that 73% and 87% were low-level questions respectively and 27% and 13% were high-level questions in the two textbooks respectively.

In an analytical study, similar to Rogers' (1973), Engelhardt (1978) analyzed the new editions of the fourth, fifth, and sixth grade social studies textbooks. The findings were similar to Rogers' findings with a slight difference in the percentages. The researcher found 37% to be on the comprehension level, 27% on the knowledge level, 16.8% analysis, 10.6% evaluation, 5.0% synthesis , and 3.1% application.

Hoeppel (1980) studied the reading skills development in textbooks used in Maryland's community colleges remedial reading programs. The study aimed at determining the question's frequencies per each taxonomic category and whether there was a significant difference among the categories and the significant difference between the observed frequency and the expected frequency of questions per taxonomy category. Hoeppel analyzed 555 randomly chosen sample questions, and he found that 99% of the questions were categorized within the two lowest levels of thinking (knowledge and comprehension). He also found that the questions did not offer an equal amount of thinking determined by the six levels of Bloom's Taxonomy.

In a similar study to Habecker, Franklin (1981) analyzed questions in sixth-grade social studies textbooks published between 1965-1969 and 1975-1979. Questions were categorized according to Bloom's Taxonomy. The purpose of the analysis was to determine which period of the two had a greater portion of questions that appeared to fit the lower-or higher-level of the cognitive domain. The results of the study showed that the textbooks in the two periods included a high portion of lower-level questions.

Chinoda (1982) analyzed the high school social studies textbooks for grades ten and eleven used in Zimbabwe. The textbook questions were categorized according to the six cognitive levels of Bloom's

Taxonomy. The researcher found that 88% of the questions were at the knowledge and comprehension levels and only 12% at the higher levels.

Chamblee (1983) also analyzed three chapters' end questions in selected eighth grade history textbooks according to Bloom's Taxonomy over three publication periods: (Pre-Bloom, 1968-1972, and 1978-1982). He used the (.05) level of significance to determine if a change in the cognitive levels of questions, over the three periods, had occurred. The findings reflected a downward shift in cognitive levels of questions with concentration on the knowledge and comprehension levels. The highest four levels received very little attention.

A general study of the secondary art education (Humbler, 1984) revealed that most of the questions posed in the classroom elicited memory- recall responses. The study recommended that art criticism questions be formulated within the hierarchical categories of Bloom's Taxonomy.

In a study conducted by Al-Khateeb (1985), the questions in the biology general secondary exams (Tawjihi) in Jordan were compared with the teachers and the textbook questions. The study aimed at determining to which degree the questions of the three-above mentioned groups fitted the six cognitive levels of Blooms' Taxonomy. The study also compared the old biology curriculum (1970-1975) with the new one (1976-1980). The results revealed a preponderance of the questions that

measured the knowledge and comprehension levels, while there was a shortage in the higher cognitive level questions.

In his study, Logan (1985) sought to determine the distribution of instructional questions across the six cognitive levels of Bloom's Taxonomy. Questions presented in the fifth grade class social studies textbooks were analyzed in the study. The research findings showed that there was a significant difference in the question's distribution.

Rinchuse (1985) and four independent judges classified 563 test items of the written examinations administered by the University of Pittsburgh School of Dental Medicine during the academic year 1983-1984. The analysis of the questions was according to the six levels of Bloom's Taxonomy. The researcher and the judges found that 83.9% were knowledge questions, and 16.1% were at the comprehension level. No questions were found at the other four levels (application, analysis, synthesis, and evaluation). In other words, the examinations failed to develop the student's higher thinking skills. On the contrary, they emphasized the students' ability of recalling facts.

Clevenstine (1987) analyzed and classified the Individualized Science Instruction System (ISIS) mini courses test items, according to Bloom's Taxonomy, to determine the levels of cognition emphasized.

The findings indicated that ISIS mini courses test objectives were written at the knowledge and comprehension levels.

Risner (1987) studied the five most widely used fifth grade science textbooks in Alabama, Texas, Tennessee, and California to identify the cognitive levels of questions and to discover whether there was a significant difference among the distribution of questions across the six levels of Bloom's Taxonomy. The results revealed that 61% of the questions were at knowledge level, 34% comprehension, 5% application, and only one question was found at the level of evaluation. No test items represented the analysis and synthesis levels.

Asfour (1988) studied a group of 45 teachers randomly selected from all the elementary history teachers at UNRWA schools in Jordan during the academic year 1987-1988. Teachers collected the questions from 90 history textbook lessons. Of all the questions, 84.3% were categorized under knowledge level of Bloom's Taxonomy, 11.3% under comprehension level, 5.3% belonged to the higher cognitive levels (application, analysis, synthesis). The evaluation level was completely neglected.

In their study, Armbruster and Ostertage (1989) examined 7,500 questions presented in the fourth and fifth grade science textbooks. They classified questions according to many characteristics including the type

of cognitive demand. One conclusion was that two-thirds of the questions were of low cognitive demands.

Giannangelo and Kaplan (1992) studied four social studies textbooks used by the Memphis City public schools in Tennessee. One of the purposes of the overall textbooks evaluation was analyzing the textbook questions according to the six cognitive levels of Bloom's Taxonomy. The study found that the textbooks partially covered the objectives they were designed to achieve. That is to say, the textbook questions did not really cover the six levels of Bloom's Taxonomy.

Abaya (1993) investigated questions proposed in junior and senior high social studies textbooks to find out to which degree the textbook questions developed higher thinking skills. Results of the study revealed that the textbook questions strongly developed lower-level questions.

In Jordan, Abd-Elnoor (1994) evaluated the sixth grade science textbook. He analyzed the textbooks in general, including the questions which were classified according to the six cognitive levels of Bloom's Taxonomy. The analysis showed that 50% of the questions were of knowledge level, while 31% were of comprehension level, 2% application level, and 17% were categorized under the other higher-level questions (analysis, synthesis, evaluation).

Sakhi (1994) conducted a study on the science textbook for the first preparatory class and the biology textbook for the second and third preparatory classes in Iraq. The findings showed that 65% of questions were knowledge questions, 22% comprehension, 5% application, 7% analysis and 1% evaluation.

Finley (1996) examined the eleventh and twelfth grade secondary school courses in the subject areas of English, science, and social studies. The investigation of these courses included the examination items and the utilization of Bloom's Taxonomy of the Educational Objectives (1956). The three subject areas of English, science, and social studies had a large proportion of objectives with the three lower classification categories of Bloom's Taxonomy across all of the two academic levels.

Ibraheem (1998) investigated the cognitive domain levels that measure the history textbook questions for the secondary-literary sixth grade in Iraq to find out the percentage given to each level. The textbook questions were analyzed according to Bloom's Taxonomy. The findings indicated that a total of 63 questions out of 87 questions measured the knowledge level with a percentage of 72.4%, while 25.2% measured the comprehension level. It was also found that only two questions (2.2%) measured the students' ability in evaluation. The application, analysis, synthesis levels were completely neglected.

Rawadieh (1998) studied the questions listed in secondary history and geography textbooks used in Jordan. The results showed the preponderance of lower-level questions.

Studies evaluating the use of Bloom's Taxonomy in general:

Farely (1969) examined whether teachers' using of Bloom's Taxonomy would operate within the classroom at a higher cognitive level rather than teachers' using of other methods in teaching. For this purpose, he studied two groups. The experimental group consisted of six student teachers who received instruction for eight-weeks of individual training and feedback sessions in the use of Blooms' Taxonomy. The control group of six student teachers received equal time instruction. The results showed a significant difference in favor of the experimental group of student teachers.

In his study, Buggey (1972) selected one hundred eight (108) second-grade students and randomly assigned them to three groups. The major purpose was to determine the relative effect on learning of two techniques. The first one was by using 70% knowledge-level questions and 30% higher-level questions according to Bloom's Taxonomy, and it was called (treatment A). The other was by using the reverse ratio and was called (treatment B). After six weeks of instruction, results showed that group A demonstrated significantly better achievements than group B.

Habecker (1976) analyzed 6,988 questions demonstrated in basal reading manuals between 1950-1959 and 1966-1975. He used Bloom's Taxonomy as criteria in classifying questions across the cognitive levels. He found that most emphasis was on memory and recall questions; the least emphasis was on application questions while the rest of higher cognitive levels showed a general increase in most of the series studied.

Babatolu (1982) used Bloom's Taxonomy to analyze the biology test items of the West African School Certificate Examinations (WASCE) of 1973, 1975, 1976, 1979, and 1980. The researcher wanted to find out the percentage of the test items represented by each of the six levels of the taxonomy, and whether there was a trend over time towards higher-level test items. The analyzed test items were evaluated by five highly qualified educators. The overall results showed 71% of test items belonging to the first category (knowledge).

Adkins (1983) selected courses from Columbia School of Nursing in the University of Missouri. He analyzed textbook units and teacher's verbal questions according to Bloom's Taxonomy of the Cognitive Domain. He also studied the student's expectations on the basis of their performance. The study results showed that most of the unit objectives, teacher's questions and student's expectations were at the lower levels of cognitive processing.

The first-year remedial reading instruction in teaching English as a second language at the Hong Kong Baptist College was examined by Costin (1986). He focused on the levels of cognitive processes related to reading assignments, and the cognitive ability levels of weak students. Results showed that 21% of the students were regarded by the teachers as weak in the four lower cognitive levels of Blooms' Taxonomy. He suggested that English language teachers deal with this weakness by cognitive skills training through new questioning strategies which contain questions of higher cognitive levels according to Bloom's Taxonomy.

Sabater (1986) selected, for his study, the poor comprehenders from the seventh grade of an urban middle school. He divided the students into three groups and gave each of them a passage of science material. Sabater asked students to read the passage, answer ten enclosed questions, and generate questions of their own. The questions were developed according to Bloom's Taxonomy of Educational Objectives. The results revealed that self-generated questions alone did not increase the level of reading comprehension but the training in question generation did, especially when trained to use Bloom's Taxonomy.

McCune's 1989 study sought to find out the change in the student's thinking skills, attitudes, and achievement. For the purpose of the study, 145 sixth grade science students were divided into two groups: an experimental and control. They were taught the same content by the

same instructor. The integration of a cognitive system with the scientific method (ICSSM) was used in teaching the experimental group, while the teacher's manual was used to teach the control group. After a six-week period of instruction, the results indicated that using Bloom's Taxonomy of Educational Objectives in the scientific method stimulated student's higher thinking skills more than the traditional way of teaching.

Gierl (1993) studied an achievement test in mathematics for grade six. The purpose of the study was to find out whether the Taxonomy of Educational Objectives provided an accurate model to guide item writers for anticipating the cognitive processes used by grade six students to solve items on large-scale achievement tests in mathematics. He classified the student's cognitive processes via Bloom's Taxonomy. The overall match between the responses expected by item writers and observed from students was 53.7%. The results showed that students used the cognitive processes described in Bloom's Taxonomy, but not in the same proportions as anticipated by item writers.

Comments on the studies

After reviewing the previous studies, the researcher concluded the following:

1. Most of the research and studies aimed at analyzing different textbook questions according to Bloom's Taxonomy, and divided them into two levels (Hamblen, 1984; Armbruster, 1989; Abaya, 1993). However, a few studies concentrated on the percentages of the

questions that covered each cognitive level (Pancella,1971; Rogers ,1973; Engelhardt,1978).

2. The research studies covered different subjects like social studies, biology, science, and mathematics. The studies also dealt with different educational stages and levels in different countries.

Summary

Questions are considered a vital component of the textbooks as they aim at creating an interest in the subject. Therefore, there is a necessity to evaluate the questions in terms of their ability to achieve the educational targets. Bloom's Taxonomy proved to be effective in evaluating the efficacy of the questions. During the past decades, many researchers analyzed the questions of different textbook subjects by using Bloom's Taxonomy. These studies fell into two major groups. The first group examined the cognitive levels of the textbook questions and the second evaluated the use of Bloom's Taxonomy in general. However, there was no study that evaluated the English curriculum by using Bloom's Taxonomy.

Chapter Three

Methodology

Introduction

In this chapter the researcher presents the instruments, the population, and the data collection.

This study aimed at identifying and analysing the cognitive levels of Bloom's Taxonomy for the instructional goals included in the eighth grade of the English Petra textbooks questions in Palestine. The purpose of the analysis of the instructional questions was to determine the distribution of the lower and higher level questions.

The importance of the distribution of the instructional questions across lower and higher level cognitive levels of Bloom's Taxonomy will improve student development of higher thinking skills and hence the ability of understanding the required material, solving problems and decision making.

The research procedure used in this study was identified and described in this chapter. The procedure included the following:

- (i) Description of the course textbooks;
- (ii) Classification and selection of the textbook questions;
- (iii) Instrumentation;
- (iv) Description of the instrument;

(v) Rating producers;

(vi) Data collection;

552660

(vii) Description of the analysed data.

The major questions that directed the research procedure for this study were the following:

1. What is the percentage given to each level of the cognitive domain in the eighth grade English textbooks?
2. What are the percentages given to the lower-level and higher-level questions in the eighth grade English textbooks?
3. Is there any significant difference at (.05) among Bloom's Taxonomy of Educational Objectives in the English student book for the eighth grade?
4. Is there any significant difference at (.05) among Bloom's Taxonomy of Educational Objectives in the English workbook for the eighth grade?

Description of the course textbook :

The eighth grade English course was the subject of this study. This course consists of a student book, a workbook and a story collection. (three separate stories about three famous Arab men)

The questions listed in the above three textbooks were all selected and analysed. These textbooks, used in this study, are listed in Table 1. These texts were in use during the academic year 1999-2000.

Table 1

Textbooks Used in the Study:

Title of Textbook	Publisher	Publication Year	Grade Level
Student Book	Jordanian Ministry of Education	1999-2000	8 th
Work Book	Jordanian Ministry of Education	1999-2000	8 th
Story Book	Jordanian Ministry of Education	1999-2000	8 th

Classification and selection of the textbook questions:

Since the number of questions (2,194) was reasonable, all of them were included and analyzed. The number of questions was determined according to the answers required by each question. The authors of the textbook numbered more than one answer. Then each part of the question was considered as a separate question and classified as such.

For example, the following question was numbered as one question in the text, question #5 in story 1. However, it will be counted and considered as two questions:

(How did John Palerlegus feel when he spoke to Ibn Batuta? Give reasons for your answer)

Thus, such a question requires two answers and each part of it is classified as a separate question.

The total number of questions obtained from each textbook is listed in Table 2.

Table 2

Number of Questions in Each Textbook :

Textbook	Number of Questions
Student Book	693
Work Book	1,424
Story Book	77
Total	2,194

Instrumentation :

As mentioned before, the study aims at analyzing the textbook questions according to the criteria set by Bloom's Taxonomy of the Cognitive Domain . This criteria and verb keywords are presented in appendix 2.

Although Bloom's Taxonomy was developed originally for classification of educational objectives, many studies (Alkhateeb,1985 ; Rawadieh , 1998 ; Giannangelo and Kaplan 1992) have shown that it is a valuable instrument for analysing instructional questions. For example, Hoppel (1996) found the taxonomy an efficient device for question analysis (and it may be one of the guides publishers and instructors use in designing curriculum).

Bloom's Taxonomy is considered as a remarkable resource in the educational planning because of its successful history in

analyzing questions. Bloom's Taxonomy is an appropriate instrument for the purpose of this study .

Description of the Instrument:

In 1956, Benjamin Bloom, with a group of educational psychologists, developed a classification of levels of intellectual behavior in learning . This became a taxonomy of three overlapping domains : the cognitive , psychomotor, and affective . In this study, I concentrated only on the cognitive domain .

Cognitive learning is demonstrated by knowledge recall and the intellectual skills: comprehending information, organizing ideas, analysing and synthesizing data , applying knowledge , choosing among alternatives in problem-solving, and evaluating ideas or actions . This domain on the acquisition and use of knowledge is predominant in the majority of courses. Bloom identified six levels within the cognitive domain , from the simple recall or recognition of facts , as the lowest level , through increasingly more complex and abstract mental levels, to the highest order which is classified as evaluation as Bloom (1956) presented in Figure 1 .

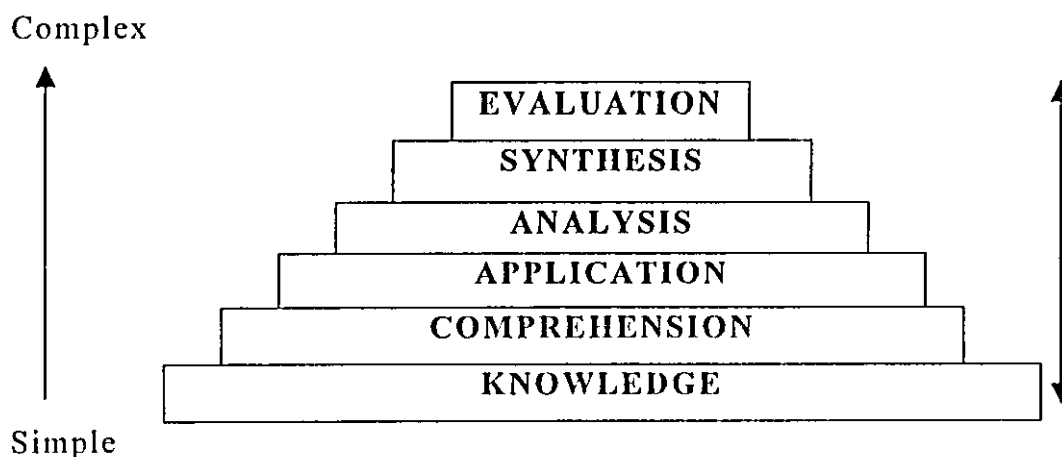


Figure 1 : Design of Bloom's Taxonomy

The following are general characteristics of questions that fall under each level of the taxonomy :

1. **Knowledge** of terminology ; specific facts; ways and means of dealing with specifics (conventions , trends and sequences , classifications and categories , criteria, methodology); universals and abstractions in a field (principles and generalizations, theories and structures) . Knowledge is (here) defined as the remembering (recalling) of appropriate, previously learned information .

2. **Comprehension**: Grasping (understanding) the meaning of informational materials by one of the following :

a. **Translating**: Translation questions require students to change information into different symbolic forms or language without loss of meaning . This change may be for example from one verbal form to another or from verbal to graphic form ;

b. **Interpreting**: Interpretation questions require students to determine relationship between or among given parts of communication (facts, values , definitions , or generalizations) ;

c. **Extrapolating** : Extrapolation questions require students to make estimates or predictions.

3. **Application** : The use of previously learned information in a new and concrete situation to solve problems that have single or best answers. Application questions emphasize the use of information and skills and include a minimum of instruction or direction .

4. **Analysis**: The breaking down of informational materials into their component parts, examining and trying to understand the organizational structure of such information to develop divergent conclusion by identifying motives or causes, making inferences, and/or finding evidence to support generalizations . Analysis questions can be started inductively. In inductive questions, students reason from specific to general. Deductive questions require students to arrive at a conclusion by applying a generalization to specific instance .

5. **Synthesis**: Compiling information together in a different way by compiling or proposing alternative solutions. Synthesis questions encourage students to think critically in order to attain a solution to a particular problem.

6. **Evaluation**: Judging the value of material based on personal values/opinions, resulting in an end product , with a given purpose, without real right or wrong answers . Questions

on evaluation level require students to be subjective respondents (Bloom ,1956) .

Rationale for Utilizing Bloom's Taxonomy:

The selection of Bloom's Taxonomy, as the principal instrument for this study, was for two reasons :

1. When compared with other methods of classification and Bloom's Taxonomy of Educational Objectives analysis can provide a means to determine the level at which an objective is written and the corresponding questions which need to be asked to achieve the objectives (Alkhateeb, 1985).

2. Bloom's Taxonomy has proved its superiority and effectiveness over other methods after it was verified widely and successfully in research and studies for the analysis of the instructional questions (Chinoda , 1982 ; Logan , 1985) .

Data Collection:

The eighth grade English textbook questions were analyzed and classified according to the cognitive levels of Bloom's Taxonomy .The researcher followed approximately the steps listed below in the analysis of the instructional questions :

1. Reading the textbooks extensively, deeply and carefully;

2. Understanding the questions and finding their answers ;
3. Concentrating on the typical question classifications and keywords;
4. Interviewing some teachers and students of these textbooks and participating in seminars on curriculum analysis ;
5. Designing an analysis sheet . This sheet consists of group of columns that contains a number of units , number of questions and corresponding pages. It also includes the full text of the questions and six columns including the cognitive levels of Bloom's Taxonomy. For each question one sign of (x) was marked opposite the suitable cognitive level the question covered (see Appendix 3);
6. Classifying all questions according to Bloom's Taxonomy depending on the context of the question and the way of answering it . The keywords listed in Appendix 2 were used as criteria;
7. Submitting the analysed questions to a committee of judges committee members worked independently;
8. Collecting the judges' notes and comments. Where there was a consensus on the analysed question , the question was excluded . Where there was a difference in the evaluation of the analysed questions, the raters reanalysed the questions and came to a complete consensus on all questions .
9. Calculating each cognitive level and its number of questions for all units , textbooks and for the total sum of all

textbooks involved in the study (See Tables 4,5,6, pages 36,37,38);

10. Calculating both the lower and the higher level questions of each textbook and the total sum of all textbooks (See Table 7, page 39);

11. Calculating the frequencies and corresponding percentages;

12. Using frequency tables and bar graphs in order to represent the data and to answer the research questions.

Data Analysis :

The researcher conducted two procedures to determine the analysis reliability. The first was by analyzing the questions according to the criteria in Appendix 2. The researcher repeated all the textbook question analysis after two weeks and the same percentages were obtained.

The second procedure was conducted by supplying three raters with a representative unit ,which contained all the types of questions from the three textbooks (See Appendix 1 for the jury members' names). The researcher's results were compared to the judge's results and were found to be highly agreeable.

As mentioned before, questions were sorted and classified according to the six cognitive levels of Bloom's Taxonomy .Corresponding frequencies and percentages were calculated . To facilitate the understanding of the results and

percentages, the data were represented in both the tabular and more conveniently the bar graphs.

Classified questions were then grouped to fall into either the lower level category or the higher level category. Results of the data were deeply studied and analysed. Conclusions and recommendations were made.

Summary

The research procedure used in this study was presented in this chapter. The procedure included the description, classification of the textbooks, instrumentation, description of instrument, rating procedures, data collection and description of data analysis.

Chapter Four

Results

In this chapter the researcher presents the results of the study.

The major purpose of the study was the analysis of the eighth grade English textbook questions used in Palestine according to Bloom's Taxonomy. The questions were classified and distributed across the six cognitive levels of Bloom's Taxonomy.

Results were obtained after calculating frequencies and reporting percentages. The data then were plotted on bar graphs.

Findings :

After analyzing and classifying frequencies, a total of 2,194 questions were obtained from the three textbooks (student textbook, workbook, stories). The questions were distributed among the three textbooks as seen in Table 3:

Table 3

Questions' frequencies and percentages for each textbook:

Book	Number of questions	%
Student Book	693	32%
Workbook	1,424	65%
Stories	77	3%
Total	2,194	100%

As shown in Table 4 the majority of the questions were categorized under the first two taxonomic levels.

Of the 2,194 questions, 440 (20%) were concerned with knowledge. The second level had the frequencies of 909 (41%). After calculating the frequencies of the two lower levels together, they obtained 1,349 questions (61%). The remaining four levels had a total of 845 (39%). Of the four levels, application questions represented the highest number with 558 questions (25%). Analysis had 82 questions (4%), synthesis with 193 questions (9%). The least number of questions was scored for evaluation with only 12 questions (1%). The results were plotted on bar graphs as in Figure 2.

Table 4

Frequencies and percentages per each taxonomic level for the three textbooks:

Book	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation	Total
Student book	98	254	235	51	44	11	693
Workbook	331	606	319	25	142	1	1424
Stories	11	49	4	6	7	0	77
Total	440	909	558	82	193	12	2194
%	20%	41%	25%	4%	9%	1%	100%

Even though the results showed a preponderance of the questions on the lower cognitive levels, which counted 1,349 in comparison with the questions posed on the higher cognitive levels, which counted 558, there was a difference in the distribution of the questions across the three textbooks. The workbook contained double the numbers of questions in the student book, while the story had the lowest number of questions (See Figure 3).

An examination of the Tables 5 and 6 reveals differences in the questions' distribution across the instructional units in the same textbook.

Table 5

Frequencies and percentages per each taxonomic level for the student book:

Unit	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation	Total
1	0	12	25	2	2	0	41
2	0	13	6	2	3	0	24
3	15	12	6	2	3	0	38
4	1	13	6	2	3	0	25
5	4	18	3	1	5	0	31
6	4	11	14	2	4	0	35
7	9	18	13	2	4	0	46
8	1	19	2	4	4	0	30
9	5	11	6	3	2	0	27
10	2	15	7	1	0	0	25
11	1	5	12	6	1	0	25
12	23	10	15	1	2	0	51
13	10	10	10	2	2	3	37
14	2	16	20	4	1	0	43
15	1	9	14	2	0	1	27
16	0	11	10	0	1	0	22
17	4	13	19	2	1	1	40
18	1	13	7	5	1	5	32
19	3	7	11	4	1	0	26
20	10	11	13	2	2	1	39
21	0	7	5	2	1	0	15
22	2	0	11	0	1	0	14
Total	98	254	235	51	44	11	693
Percentage	14%	37%	34%	7%	6%	2%	100%

Table 6

Frequencies and percentage per each taxonomic level for the workbook:

Unit	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation	Total
R1*	46	2	42	3	0	1	94
1	0	36	1	0	1	0	38
2	0	34	10	0	6	0	50
3	8	31	1	1	9	0	50
4	0	40	15	0	11	0	66
5	29	28	20	0	0	0	77
R2	8	4	19	0	8	0	39
6	25	38	5	0	5	0	73
7	0	32	6	0	8	0	46
8	10	1	19	6	2	0	38
9	0	41	26	0	6	0	73
10	32	46	11	0	1	0	90
11	12	25	8	0	0	0	45
R3	6	0	15	0	20	0	41
12	35	14	4	0	13	0	66
13	1	33	16	0	2	0	52
14	28	14	12	3	0	0	57
15	0	23	15	2	0	0	40
16	1	31	23	0	17	0	72
17	7	13	5	0	9	0	34
R4	0	4	16	0	0	0	20
18	37	11	5	0	15	0	68
19	8	36	10	0	0	0	54
20	15	35	0	10	0	0	60
21	8	22	1	0	0	0	31
22	15	12	14	0	9	0	50
Total	331	606	319	25	142	1	1424
Percentage	23%	43%	22%	2%	10%	0%	100%

*R: Revision

In the student textbook, unit 22 had 14 questions only while unit 12 had 51 questions.

In the Workbook, Revision 4 (R4) had 20 questions, while the Revision 1 (R1) had the highest number of questions (94).

In the story, it was fairer because the number of the questions in the three stories was very close (Table 7).

Table 7

Frequencies and percentages per each taxonomic level for each story:

Story	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation	Total
1	5	13	1	3	3	0	25
2	2	16	2	0	2	0	22
3	4	20	1	3	2	0	30
Total	11	49	4	6	7	0	77
Percentage	14%	64%	5%	8%	9%	0%	100%

By analysing Tables 5, 6, 7 it is clear that there was a difference in the questions' distribution across the levels in each unit in the textbooks. Some of the levels in some units had no questions at all while others had a large number of questions. In the three textbooks, the questions in the analysis, synthesis, evaluation levels ranged from 0-20 questions.

The knowledge, comprehension and application levels ranged from 0-46 questions.

As a result, we can notice that there was a difference in distribution of questions across the six cognitive levels in the units in each textbook among the three textbooks, (See Figures 4-18, Appendix 4) .

Research Questions:

Research Question 1:

1-What is the percentage given to each level of the cognitive domain in the eighth grade textbooks?

In order to find the percentage given to each level, descriptive statistics was used for this purpose. As the total of 2,194 was reasonable, all the questions were analysed and classified into levels according to criteria (See Appendix 1). A special sheet was prepared for this purpose and each question was categorized in the appropriate level referring to the above mentioned criteria (See Appendix 3).

The sheets were analysed by three judges who agreed on the analysis. Then the question frequencies for each level were calculated in each textbook .

An examination of the individual textbooks revealed more accurate results . For the student textbook, the highest number of questions was categorized for comprehension level with a total of 254 questions, followed by application with 235 questions. Knowledge obtained 98 questions, analysis 51 questions, synthesis 44 questions and evaluation 11 questions.

As shown in Figure 19 the comprehension had a percentage of 37% of the total of questions presented in the student book .

Application level took 34% of the questions followed by knowledge (14%) . The other levels, analysis, synthesis and evaluation, had 7%, 6%, 2% respectively.

The results were slightly different for the workbook which had double the number of the questions in the student book. Comprehension level had 606 questions and this time it was followed by knowledge level with a total of 331 questions. Application had 319 followed by synthesis with 142 questions, analysis 25 questions, and finally the evaluation level took only one question.

This was plotted on Figure 20. It revealed that 43% of the questions were for comprehension, 23% for knowledge, 22% for application, 10% for synthesis, 2% for analysis, and 0% for evaluation.

The distribution of the questions in the story was the most fair of all , even though it had the least number of questions among the three textbooks . The comprehension level had 49 questions (64%) followed by knowledge 11 questions (14%), synthesis 7 questions (9%), analysis 6 questions (8%), application 4 questions (5%) and evaluation 0 questions (0%) (See Figure 21).

A summary of the reported data in Table 1 shows the frequencies of the questions for each cognitive level in the three textbooks. It shows that the highest number of questions was presented in the workbook and the lowest in the story. The distribution of the questions across the six cognitive levels of Bloom's Taxonomy in the three textbooks is shown in Figure 22.

Research Question 2:

2-What are the percentages given to the lower level questions and higher level questions in the eighth grade textbook ?

All the questions in the three textbooks were classified into the six levels of Bloom's Taxonomy. The levels were then classified into two major categories (lower levels which represent the first two cognitive levels of Bloom's Taxonomy (Knowledge , Comprehension) and higher cognitive levels which refer to application, analysis , synthesis and evaluation.

By calculating the frequencies for the lower level in the three textbooks, a total of 1,349 were found (61.48 %), while the higher level accounted for only 845 questions (38.52 %).

An examination of the three individual textbooks showed that the story had the largest percentage of the lower level questions (78%) . The workbook took the next largest percentage (66%) whereas the

student book revealed 51% of its questions as low level questions (See Figure 23.

We can conclude that there was a preponderance of the lower level questions in the three textbooks as seen in Table 8 .

Table 8

Distribution of the lower and higher level questions in each textbook:

	Frequency	%
Lower level questions-Student Book	352	51%
Higher level questions-Student Book	341	49%
Lower level questions-Workbook	937	66%
Higher level questions-Workbook	487	34%
Lower level questions-Story	60	78%
Higher level questions-Story	17	22%

Research Question 3:

3-Are there any significant differences at (.05) among Bloom's Taxonomy of the Educational Objectives in the student book for the eighth grade?

To answer this question, Repeated MANOVA, using Wilks Lambda Test, was used. (Table 9).

Table 9

Results of Repeated MANOVA among Bloom's Taxonomy of Educational Objectives in the Student Textbook

Wilks' Lambda Value	(F) Value	DF	Error (DF)	SIG*
0.081	38.57	5	17	0.000*

* significant at (.05).

The results of Table 9 show that there were significant differences at (.05) through Bloom's Taxonomy of Educational Objectives in the student book for the eighth grade.

To determine among which the differences were found, Sidak Post Hoc Test was used (Table 10).

Table 10

Sidak post hoc test for the differences among Bloom's Taxonomy in the student textbook for eighth grade .

Objective	Means	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
Knowledge	4.45		-7.09*	-6.22*	2.13	2.45	3.95
Comprehension	11.54			.66	9.22*	9.54*	11.04*
Application	10.68				8.36*	8.68*	10.8*
Analysis	2.31					0.31	1.81*
Synthesis	2						1.51*
Evaluation	0.50						

* significant at (.05) .

The results of Table 10 show the following :

There is a significant difference at (.05) between :

- (knowledge > comprehension) in favor of comprehension.

- (knowledge > application) in favor of application .
- (comprehension > analysis) in favor of comprehension.
- (comprehension > synthesis) in favor of comprehension.
- (comprehension > evaluation) in favor of comprehension.
- (application > analysis) in favor of application.
- (application > synthesis) in favor of application.
- (application > evaluation) in favor of application.
- (analysis > evaluation) in favor of analysis .
- (synthesis > evaluation) in favor of synthesis .

There was no significant difference at (.05) between :

- (knowledge) and (analysis , synthesis , evaluation .)
- (comprehension + application) .
- (analysis + synthesis) .

Research Question 4:

4- Are there any significant differences at (.05) among Bloom's Taxonomy of Educational Objectives in the workbook for the eighth grade ?

To answer this question, Repeated MANOVA, using Wilks' Lambda test, was used. (Table 11).

Table 11

Results of repeated MANOVA among Bloom's Taxonomy of Educational Objectives in the workbook.

Wilks' Lambda Value	(F) Value	DF	Error (DF)	Sig.*
0.075	52.06	5	21	0.000*

* significant at (.05)

The results of the Table 11 show that there were significant differences at (.05) among Bloom's Taxonomy of Educational Objectives in the workbook for the eighth grade .

To determine among whom the differences were found, Sidak post-hoc test was used (Table 12).

The result of Table 12 show the following:

- There was a significant difference at (.05) between:

- (knowledge + analysis) in favor of knowledge.
- (knowledge + evaluation) in favor of knowledge .
- (comprehension + analysis) in favor of comprehension.
- (comprehension + synthesis) in favor of comprehension.
- (comprehension + evaluation) in favor of comprehension .
- (application + analysis) in favor of application.
- (application + evaluation) in favor of application.

Table 12

Sidak post-hoc test for the differences among Bloom's Taxonomy
in the workbook for eighth grade:

Objective	Means	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
Knowledge	12.73		-10.57	2	11.76*	7.26	12.69*
Comprehension	23.30			12.57	22.34*	17.89*	23.20*
Application	10.73				9.76*	5.26	10.69*
Analysis	0.96					-4.50	0.92
Synthesis	5.46						5.42*
Evaluation	0.03						

* significant at (.05).

- (synthesis + evaluation) in favor of synthesis .
- There was no significant difference at (.05) between:
 - (knowledge + application) .
 - (knowledge + comprehension).
 - (knowledge + synthesis).
 - (comprehension + application).
 - (application + synthesis).
 - (analysis + synthesis).
 - (analysis + evaluation).
 - (synthesis + evaluation) .

Comparison between the research findings and the results of the previous studies

The results of this research agreed with the majority of the results of the previous studies. However, the findings of a few previous studies contradicted the results of this research.

The study results disagreed only with Moore's study (1926) which showed the superiority of thought questions over memory questions.

This study is similar to Rogers (1973), Risner (1987), Asfour (1988), Abd-Elnnor (1994) in analysis textbooks' questions according to Bloom's Taxonomy of the Educational Objectives. It is also similar to them in the results of the analysis, which indicated a preponderance in the low cognitive level kind of questions.

This study differs from Farely (1969), Buggy (1972), and Muccunel(989), in using only the descriptive method. The three studies in question used experimental and control groups in addition to the descriptive method. This study also differs from Habecker (1976), Franklin1(981), Chamblee1(983),and Al-khateeb (1985), by comparing the six cognitive levels questions in one period of time (1999-2000); the other studies compared the six cognitive levels questions in two periods of time.

This study differs from all the studies, cited in this chapter, in that it is the first one dealing with English language textbooks in Palestine.

Summary:

In this chapter, the results were summarized in tables. The frequencies and percentages of the questions were allocated per each taxonomic level for the three books. The four research questions were discussed.

Throughout the discussion, the adopted procedure in the research was elucidated.

Chapter Five

Discussion, Conclusions and Recommendations

In this chapter the researcher presents the discussion, conclusions and recommendations.

The major purpose of this study was to examine whether the questions employed in the three English Petra textbooks for the eighth grade in Palestine covered the six cognitive levels of Bloom's Taxonomy. The taxonomy was used to categorize the level of questions into two categories: low level questions (knowledge, comprehension), high level questions (application, analysis, synthesis, and evaluation).

The review of literature indicated that there was an overemphasis on the low level questions in the textbooks in different fields of study like science, history, biology, social studies, geography, and mathematics. Several researchers reported that students' performance was affected by their learning or cognitive styles. That means if the student was exposed to a high level question, that would influence his way of thinking, and he would be able to achieve higher cognitive tasks. In order to discover whether the English textbooks for the eighth grade really enhanced students' higher thinking skills, some 2,194 questions

were analyzed according to Bloom's taxonomy. The results showed that there was a preponderance in the low level questions.

Findings and Conclusions

This study was conducted to answer the following questions:

1. What is the percentage given to each level of the cognitive domain in the eighth grade English textbooks?

For this purpose, all the questions in the three textbooks were analyzed via Bloom's Taxonomy of the Educational Objectives. The questions were categorized within the six cognitive levels of the taxonomy. The number of questions at each level in each textbook was cited down and the frequencies and percentages of the questions in each level, among the three textbooks, were then computed. The comprehension level had the greater portion of the questions (41%) of the total. It was followed by application questions which represented 25% of the total. The questions on the knowledge level came in the third place with 20%. Synthesis had 9%, analysis 4%, and evaluation formed only 1%.

Even though there was a slight difference in the percentages of the question distribution among the levels, there was still a quite similarity between the research results and the results in two studies (Engelhardt, 1978 ; Abd-El Noor, 1994). These two studies indicated that

the majority of the questions were of the cognitive levels (knowledge, comprehension, application).

2. What are the percentages given to the lower-level questions and higher-level questions in the eighth English grade textbooks?

In order to answer such a question, the three textbooks were examined separately. First, the frequencies of the cognitive levels were computed for each textbook. Secondly, the frequencies of questions at the first two levels, in the three textbooks, (student textbook, workbook, stories) were calculated together to determine the low level percentage. A total of 1,349 questions were found, compared to 845 questions which formed the rest four cognitive levels (application, analysis, synthesis, and evaluation) which stand for the high level of the taxonomy. By translating the frequencies into percentages, the low level had 61.48% of the total; the high level had 38.52%. These percentages were for the three textbooks when looked at as a unit or a curriculum. The result was the same with a slight difference in the distribution of the percentages across the three textbooks. By examining the three textbooks separately, the story had the greater proportion of the low level questions among the three textbooks. The low level questions formulated 78% of the story questions. The workbook came in the second place, the calculated low level questions in it represented 66%. The analysis of the student textbook revealed that 51% of the questions were on the two low cognitive levels. The results were quite similar to the results conducted

by AlKhateeb (1985), Clevenstine (1987), Armbuster & Ostertage (1989), Abaya (1993), Finely (1996) and Rawadieh (1998).

The results of the first and second questions may be attributed to the idea that language is theoretical and depends on memorizing new vocabulary more than anything else. Because of this, we can see that most of the questions were categorized within the first three levels. However, the researcher believes that language is functional as well as theoretical. In other words, student cannot master the language unless he/she is able to express himself/herself in his/her own words which means using the higher thinking skills like analyzing the facts, synthesizing words to make meaningful sentences, and interpreting his/her thoughts by understanding and evaluating situations.

In other words, the results showed that there was an emphasis on the low level questions posed in the textbooks since the year 1966. This result implies that there was no significant difference in the curriculum concept through the previous years. The method of teaching is still almost the same, depending on memorizing facts and cramming the students' mind with information and knowledge without giving him/her the chance to think and apply his/her knowledge in new situations.

3. Is there any significant difference at (.05) among Bloom's Taxonomy of Educational Objectives in the student textbook for the eighth grade?

In the light of the question, Repeated MANOVA, using Wilks Lambda Test, was used to find out if there was a difference among Bloom's Taxonomy in the student book. The results of the test showed a significant difference among the six levels of the taxonomy in favor of the first three levels.

4. Is there any significant difference at (.05) among Bloom's Taxonomy of Educational Objectives in the workbook for the eighth grade?

To answer the question, the same Repeated MANOVA Test was used and the value of 52.06 was obtained which indicates that there were significant differences among the six levels of the taxonomy.

These results of the third and fourth questions can be attributed to the nature of the units. Some units talked about literature, history, famous men in the last century, athletic games and historical places which may form for the curriculum designers a theoretical material that could be measured by low cognitive questions. The researcher does not agree with this point of view. She believes that even the theoretical topics need to be evaluated, analyzed, and can be a good material to write about, which means using the synthesis skill to form compositions.

By comparing the research third and fourth questions with the previous studies, one can notice the similarity between this research and several other studies: Rogers,1973; Pancella,1971; Engelhardt,1978; Sakhi,1994. These studies indicated a significant difference among the levels. Some levels had a high percentage. (Pancella, 1971). The knowledge had 71.88% of the questions while the evaluation had 0.04%.

These results imply that there was no a significant difference in the curriculum concept in previous years. The method of teaching is still almost the same depending on the traditional view of the student as being a consumer of knowledge. Against this background, the curricula are designed to stimulate memorizing facts and supplying the student's mind with information and knowledge without giving him the chance to think and apply his knowledge in new situations.

Recommendations:

In the light of the study findings, the researcher recommends the following:

1. The questions employed in the English Petra Textbooks for the Eighth grade should be improved to cover the six cognitive levels of Bloom's Taxonomy.
2. Since Bloom's Taxonomy has been approved to be relevant criteria, teachers and curriculum designers should be trained to use it effectively by teachers, principals and educational supervisors in writing instructional questions.

3. Since the textbooks in question did not cover the six cognitive levels sufficiently, teachers should provide the students with higher level questions in order to make up for the shortage.
4. The Palestinian curriculum designers should benefit from the shortcomings in the mentioned textbooks to improve their questioning techniques in the new Palestinian curricula.
5. This study only analyzed the English Petra textbooks for the eighth grade. Therefore, further studies need to be conducted on textbooks of other grades.
6. A study should be conducted to find out to which degree the teachers and students really pay attention to each question in the textbooks.

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Appendix 1

Keywords used as criteria in questions' analysis and classification

From:

<http://www.valdosta.peachnet.edu/~whuitt/psy702.cogsys/bloom.html>

<http://www.miramar.sdccd.cc.ca.us/cmte/curr/bloom.html>

KNOWLEDGE	COMPREHENSION	APPLICATION	ANALYSIS	SYNTHESIS	EVALUATION
Cite	Add	Acquire	Analyze	Abstract	Appraise
Count	Approximate	Adapt	Audit	Animate	Assess
Define	Associate	Allocate	Blueprint	Arrange	Choose
Describe	Change	Alphabetize	Breakdown	Assemble	Compare
Distinguish	Characterize	Apply	Categorize	Budget	Conclude
Draw	Clarify	Ascertain	Characterized	Categorize	Consider
Enumerate	Comment	Assign	Classify	Code	Contrast
Identify	Compare	Attain	Compare	Combine	Counsel
Index	Compute	Avoid	Confirm	Compile	Criticize
Indicate	Contrast	Back up	Contrast	Compose	Critique
Inquire	Convert	Calculate	Correlate	Conduct	Defend
Label	Defend	Capture	Debate	Cope	Determine
List	Demonstrate	Change	Deduce	Correspond	Estimate
Match	Describe	Choose	Describe	Create	Evaluate
Meet	Detail	Classify	Detect	Cultivate	Explain
Memorize	Differentiate	Complete	Diagnose	Design	Grade
Name	Discuss	Compute	Diagram	Develop	Hire
Outline	Distinguish	Construct	Differentiate	Devise	Interpret
Point	Elaborate	Customize	Discriminate	Dictate	Judge
Quote	Estimate	Demonstrate	Dissect	Enhance	Justify
Read	Example	Derive	Distinguish	Explain	Measure
Recall	Explain	Determine	Document	Facilitate	Predict
Recite	Express	Diminish	Ensure	Format	Prescribe
Recognize	Extend	Discover	Examine	Formulate	Rank
Record	Extrapolate	Draw	Experiment	Generalize	Rate
Relate	Factor	Employ	Explain	Generate	Recommend
Repeat	Generalize	Examine	Explore	Handle	Release
Reproduce	Give examples	Exercise	Figure out	Hypothesize	Revise
Review	Illustrate	Explore	File	Import	Score
Select	Infer	Figure	Group	Improve	Select
State	Interact	Generalize	Identify	Incorporate	Summarize
study	Interpolate	Graph	Illustrate	Integrate	Support
Tabulate	Interpret	Handle	Infer	Interface	Test
Trace	Locate	Illustrate	Inspect	Invent	Use
Write	Observe	Interconvet	Interrupt	Join	Validate
	Paraphrase	Investigate	Inventory	Lecture	Value
	Predict	Manipulate	Investigate	Model	Verify
	Rearrange	Modify	Lay Out	Modify	Weigh
	Report	Operate	Manage	Organize	
	Restate	Organize	Maximize	Outline	
	Review	Personalize	Minimize	Plan	
	Rewrite	Plot	Optimize	Prepare	
	Subtract	Practice	Order	Produce	
	Summarize	Prepare	Outline	Program	

	Tell	Price	Point Out	Rearrange	
	Transform	Process	Prioritize	Reconstruct	
	Translate	Produce	Proofread	Refer	
	Visualize	Project	Put into Lists	Relate	
		Protect	Query	Recognize	
		Provide	Question	Revise	
		Reconstruct	Relate	Rewrite	
		Relate	Select	Solve	
		Sequence	Separate	Specify	
		Show	Size Up	Summarize	
		Simulate	Subdivide	Write	
		Sketch	Summarize		
		Solve	Test		
		Subscribe	Train		
		Tabulate	Transform		
		Transcribe			
		Transfer			
		Use			
		Utilize			

Appendix 2
Question analysis sheets of the three English Petra
textbooks for the eighth grade

Unit	Lesson	No.	Page	Question	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
1	1	1	1	Learn the words and talk about the hospital					X	
		2	1	With your partner, ask and answer questions about this hospital ward. Then describe the one on WB page 8a.					X	
		3	1	Listen. Two people are speaking. Which of these are they?		X				
	2	4	2	a- What is wrong with boy?		X				
				b- How is the doctor going to help him?				X		
				1- How did the boy's mother call the nurse?		X				
				2- How did the nurse call the doctor?		X				
				3- Why was the boy in an oxygen tent?		X				
				4- What did the boy's blue face tell the nurse?				X		
				5- Guess the meaning of turn up (a-b-c-d).		X				
	3	5	3	Look and say (9)			X			
		6	3	About you (ask and answer) (8)			X			
		7	3	About you (ask and answer) (6)			X			

Unit	Lesson	No.	Page	Question	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
	4	8	4	Ways with words. With partner, play doctors, nurses and patients.			X			
		9	4	Make the story by reading the parts in the right order.		X				
	4	10	5	Look and say. Why do so many people visit sunland? Answer like the examples.			X			
		11	5	Read the words on the bottle and choose the right answer.(5)		X				
2	1	1	6	Learn the words and talk about the accident.					X	
		2	6	With your partner, ask and answer questions about this accident. Then describe the one on WB page 11a.					X	
		3	6	Listen. Two people are speaking. Which of these are they?		X				
	2	4	7	Find the answer while reading:						
				* Who does the reporter work for?		X				
				* Why did the reporter go on the helicopter?				X		
				1- Where did the reporter find the rope?		X				
				2- Why did the climber tie the rope round his chest?				X		
				3- How many people has Penn rescued now?		X				
				4- Why was word lucky?		X				
				5- What questions did the reporter ask the climber?		X				
				6- Ask each other questions about John Penn.					X	
				7- Guess the meaning of "cliffs"?		X				
3	5	8		Look and say.(5)			X			
4	6	9		Read then match the numbered words with those in box 5		X				
		8	10	Ways with words.			X			
		9	10	Make the story by reading the parts in the right order.		X				

Unit	Lesson	No.	Page	Question	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
3	1	1	11	Learn the words and talk about the journey.					X	
		2	11	* With your partner compare this journey with the one on WB page 14a.		X				
		3	11	Listen. Two people are speaking. Which of these are they?		X				
	2	4	12	1- Is orienteering work or a sport?		X				
				2- Does it cost a lot of money?	X					
				3- Has Lisa's life been interesting in the last few weeks?		X				
				4- How did she learn about orienteering?		X				
				5- How do people move from place to place when they're orienteering?		X				
				6- Do people have to go very far?		X				
				7- Is orienteering very dangerous?				X		
				8- Ask each other questions about Caroland Lisa.					X	
				9- Guess the meaning of "alone"?		X				
				10- You have already learned another word which means expensive, can you remember it?		X				
				Which word has the opposite meaning?	X					
	3	5	13	Look and say (5).			X			
		6	13	Dictionary (7).	X					
	4	7	14	1- Where do all these trains leave from?	X					
				2- Where do they all stop?	X					
				3- Can you reach Olding before ten in the morning any day?	X					

Unit	Lesson	No.	Page	Question	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
				4- How many trains arrive there before ten o'clock at night?	X					
				5- Where does the 9.4 train finish its journey?	X					
				6- a Which is the fastest train to Olding?		X				
				6- b Why is it the fastest?		X				
				7- Are there more trains to Olding on Saturdays than on other days?		X				
				8- On which train can't you get anything to eat?	X					
	8	14		Talk about wall picture then write the story.					X	
	9	15		Ways with words.			X			
	10	15		Read and discuss.				X		
4	1	16		Learn the words and talk about the band.					X	
	2	16		With your partner, ask and answer questions about the picture. Then describe WB page 18a. What differences can you see?					X	
	3	16		Listen. Two people are speaking. Which of these are they?		X				
	2	4	17	* What should children in a marching band do before they march?				X		
				* What shouldn't they do?		X				
				1- Why did Debby's band get the cup?				X		
				2- Is this the first time her marching band has won the championship?		X				
				3- How did she nearly spoil her band's marching?		X				
				4- How long does a championship last?		X				
				5- What questions would you like to ask Debby?					X	
				6- Guess the meaning of "My heart was in my mouth".		X				
				7- Do you know another word with the same meaning as "correct"?		X				

Unit	Lesson	No.	Page	Question	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
				8- How do you say the opposite of the most difficult thing?	X					
	3	5	18	Look and say (4).			X			
		6	18	About you. Copy this chart in your notebook. Complete it with your partner's answers. Then tell the class about them.			X			
	4	8	19	Ways with words.			X			
		10	20	Read the table and choose the right answer. (5)		X				
		11	20	Make the story by reading the parts in the right order		X				
5	1	1	21	Learn the words and talk about the picture.					X	
				1- What noises can the man hear?	X					
				2- Can they hear any beautiful sound?	X					
				3- What do they want to record?	X					
		2	21	With your partner ask and answer questions about this picture.					X	
	1	2	21	Listen and make notes to answer these questions. (2)		X				
	2	4	22	* Why is Aled Jones famous?		X				
				* What does "retirement" mean?		X				
				1- Why was Aled retired?		X				
				2- What is he going to do next year?		X				
				3- Has his voice broken yet?		X				

Unit	Lesson	No.	Page	Question	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
				4- What must a singer do to get a gold disc?		X				
				5- What is the name of the people in Wales?	X					
				6- Guess the meaning of "break", in all boy's voices break.		X				
				7- You want to buy a recording of a song . Which of these can you ask for?		X				
				8- Ask each other questions about Aled Jones					X	
				9- What questions would you like to ask him?					X	
3	5	23		Look and say.			X			
				About you . Find out what your partner has with him at school today.			X			
4	7	24		Ways with words.			X			
				Write about noises and sounds.					X	
				Read the chart and say whether you think these statements are true or false. (8)		X				
				Read and discuss.				X		
6	1	26		Learn the words then talk about the signs in the shop.					X	
				What is wrong with these signs ?		X				
				In WB there is a picture of another shop . With your partner compare it with this picture , and find out what is not written correctly.				X		
1	3	26		Listen. Two people are speaking. Which of these are they?		X				
2	4	27		Is Cynthia's problem in her hand or her head?				X		
				1- What is Cynthia's job?		X				
				2- Which half of her brain does she use when she chews an apple?			X			
				3- Which half does she use when she dials a phone number?			X			

Unit	Lesson	No.	Page	Question	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
				4- Has your brain got two halves like Cynthias?		X				
				5- a Can you spell correctly?	X					
				5- b Can you write beautifully?	X					
				6- Ask each other questions about Cynthias					X	
				7- What questions would you like to ask her?					X	
				8- Guess the meaning of taking all the care in the world.		X				
				9- Three words in this passage have the same meaning. One is difficulty, what are the other two?	X					
	3	5	28	Look and say. make question and answer for each word like the example there, check the meaning in the dictionary (10).			X			
		6	28	Look and say.			X			
		7	28	Do you have difficulty with anything? Is anything difficult for you to do?	X					
	4	8	29	Read the chart and answer the questions.(5)		X				
		9	29	Read and discuss.				X		
		10	30	Ways with words.			X			
		11	30	Two phone conversations are mixed up here. With your partner, make them into two conversations again		X				
7	1	1	31	Learn the words and describe the horse.					X	
		2	31	Using this picture and WB page 35a, ask and answer questions with your partner about how this horse was made.					X	

Unit	Lesson	No.	Page	Question	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
	1	3	31	Listen. Two people are speaking: Which of these are they?		X				
	2	4	32	Who painted the picture of a ship? How are Paul and Heather different?	X	X				
				1- What is the usual way of painting? 2- What is Paul's favorite subject?	X	X				
				3- What was Paul's job before he became ill? 4- Why has Heather given her son to her sister? 5- a Do you think Paul knows Heather? 5- b Why?		X			X	
				6- What do you think MFPA means? 7- Why doesn't Heather paint with her feet, like Paul ?		X			X	
	3	5	33	8- Ask each other some more questions about Paul and Heather. Look and say. (8)			X		X	
		6	33	Dictionary (7)	X					
	4	8	34	Talk about wall picture 2. Then write the story. Read the back and front of this card, then answer the questions. (11)		X			X	
		10	35	Look and say. (4)			X			
		11	35	Ways with words.			X			
8	1	2	36	Compare Thailand with Jordan, which is described in a table on WB page 39.						X

Unit	Lesson	No.	Page	Question	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
	1	3	36	a- Listen. Two people are speaking. Which of these are they?		X				
	1	3	36	b- And where are they?		X				
	2	4	37	* What do most people in Thailand do?	X					
				* Who can make rain?		X				
				* Where are they when they make it?		X				
				1- What is the main food that Thai people eat?		X				
				2- Is there usually a lot of rain in Thailand?		X				
				3- How often do Thai farmers harvest their rice?		X				
				4- How is rain made?		X				
				5- How can a country which has a lot of rain sometimes have too little water?				X		
				6- Can rice be grown in Jordan?				X		
				7- a Can you describe the hats Thai farmers wear?		X				
				7- b- Why do they wear them?				X		
				8- Ask each other more questions about the Thai people and Thailand.					X	
				9- What questions would you like to ask a Thai farmer or a Thai scientist?					X	
				10- Guess the meaning of a "shortage of rain"?		X				
3	5	38		Match the sentences with the pictures (8).		X				
	6	38		What about you? Talk about things that will be done for you in the next month			X			
4	7	39		Write similar paragraphs (2).						
	9	40		Ways with words.			X			
	10	40		Make the story by reading the parts in the correct order.		X				
9	1	41		Answer the questions in Table 6.		X				

Unit	Lesson	No.	Page	Question	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
	2	2	42	Why was the man's jump unusual?				X		
				Did the circus manager want to give him a job?		X				
				1- What did the man dive into?		X				
				2- Was there enough water in the tank?		X				
				3- Why did the manager's wife look away?				X		
				4- Why didn't the manager offer the man thirty-five or forty pounds a jump?		X				
				5- What questions would you like to ask the man?					X	
				6- Guess the meaning of "shook his head" (a,b,c,d).		X				
	3	3	43	Look and tell the story (5) sentences.			X			
	4	4	44	Talk about wall picture then write the story.					X	
		5	44	Dictionary (5)	X					
		6	45	Ways with words.			X			
		7	45	Look and discuss.				X		
10	1	2	45	With a partner. One of you is going on a journey to several countries in Asia. Your partner, using WB page 46a, will give you information. Make notes, like those on the right above.			X			
	1	3	46	Listen. Two people are speaking. Which of these are they?		X				
	2	4	47	* What was the Tower used for? * What is it used for now?		X				
				1- The oldest walls of the Tower are a, b, c	X					

Unit	Lesson	No.	Page	Question	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
	1	3	46	Listen. Two people are speaking: Which of these are they?		X				
	2	4	47	* What was the Tower used for? * What is it used for now?		X				
				1- The oldest walls of the Tower are a, b, c 2- Who does the Tower belong to?	X					
				3- Why are the crown jewels kept in it?		X				
				4- What happened to prisoners in the old days?		X				
				5- a Would you like to visit the Tower? 5- b Why (not)?	X			X		
				6- Guess the meaning of "ended his or her days"		X				
				7- What verb has the same meaning as "should" Look and say (4).		X				
	3	5	48				X			
		6	48	What about you? Have your parents or teachers told you things that you ought to do, or things that you oughtn't to do?			X			
	4	7	49	Read this information sheet then answer the questions (6).		X				
		9	50	Ways with words.			X			
		10	50	Remake the text by reading the parts in the correct order.		X				
11	1	1	51	Write down as many as you can remember. Play this game.	X					
		2	51				X			
	2	3	52	What was this student's problem? What was his teacher like?		X				
								X		

Unit	Lesson	No.	Page	Question	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
				1- Why do you think the student had this trouble with microscopes?		X				
				2- a Did the student like this test drawing?		X				
				2- b Why?				X		
				3- a: Did the teacher like it?		X				
				3- b: Why (not)?				X		
				4- What do you imagine happened next?				X		
				5- a: Who do you feel sorry for the student or the teacher or both?				X		
				5- b: Why?				X		
				6- What questions would you like to ask the teacher or the student?					X	
				7- Guess the meaning of "at the top of his voice".		X				
		4	53	Ask and answer (10)			X			
		6	54	Ways with words.			X			
12	1	1	55	Read this text and make a list of all the colour words in it.	X					
		2	55	Match each word in A with one or more words in B to give a more exact colour (17).	X					
	2	3	56	What did the scientist learn from this?					X	
				1- a: Who put the food on the table?		X				
				1- b: Are you sure?	X					
				2- a: Did the guests love the food or hate it?		X				

Unit	Lesson	No.	Page	Question	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
				2- b: Why was this?		X				
				3- Is a blind man a (a, b, c)?	X					
				4- Was any of the food or drink the right colour?	X					
				5- What changed the colours of the food?		X				
				6- Would you eat food which had unusual colour?	X					
				7- Do you think the colour of food is important?	X					
				8- What questions would you like to ask the scientist or the guests or the blind man?					X	
				9- Finish this sentence: when people have filled a bus, it is -----.			X			
	3	4	57	Read this, then finish these sentences in your textbook. (6)		X				
		4	58	Ways with words.			X			
		7	58	Talk about the wall picture then write the story					X	
		8	59	Look and say (6)			X			
		9	59	Write a story by connecting sentences about the pictures (7)			X			
13	1	1	60	There are 15 possibilities of questions in the table. Each student should match and ask just 3 questions.	X					
		2	60	Revision of 1.	X					
	2	3	60	* What sort of life did Chichester have?					X	
				* Why didn't Chichester retire in 1960?					X	
				1- Which did Chichester learn first to fly or to sail?		X				
				2- When did he first become famous?		X				

Unit	Lesson	No.	Page	Question	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
				3- "If you try to sail round the world" Chichester friend said, "You" finish the sentence.					X	
				4- Does anything in Chichester's life surprise you?						X
				5- a: Do you think he was a hero?						X
				5- b: Why (not)?						X
				6- What questions would you have liked to ask him?					X	
	3	4	62	Look and say. (6)						
				a- Find the sentence which goes with each picture.			X			
				b- Ask and answer like the example (5).			X			
	4	5	63	Read the announcement made by shops in the English town of Braintree. Then answer the questions. (6)		X				
				Dictionary (6)		X				
				Ways with words. Read these two texts. The writer of one of them believes the word is getting better all the time. The other writer thinks it is getting worse. Which writer wrote which text?						
	8		64	Remake the text by reading the parts in correct order		X				
14	1	2	65	1- Give three ways of saving money if you go on holiday.		X				
				2- How do some careless campers spoil the countryside?				X		
				3- Imagine you are in Britain and want to put up your tent for the night. Whom will you go and ask?					X	
	2	4	66	* Why was the canoe missing?						X

Unit	Lesson	No.	Page	Question	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
				* Who did it belong to?		X				
				* Did they get it back?		X				
				1- Does "missing" mean a, b, c?		X				
				2- Was the hostel full?		X				
				3- What was the weather like?		X				
				4- Where did the boys sleep before midnight and after midnight?		X				
				5- How did the canoe get into the garden?				X		
				6- Which are the midsummer months in England?	X					
				7- How long was the canoe missing?		X				
				8- Was the boys' tent missing too?		X				
				9- What is the meaning of "Rain was falling from the sky in buckets"?		X				
				10- a: Would you like to stay at a youth hostel?	X					
				10- b: Why (not)?						
	3	5	67	Look and say. (8) Make 4 questions in 2 forms for each (8 questions).		X				
		6	67	About you. Ask and answer questions like the example.			X			
		7	67	Talk about wall picture then write the story.					X	
	4	8	68	Read this advertisement and answer the questions.						
				1- What sort of people would join the CTC?		X				
				2- Write the associations address as it should be on a letter		X				
				3- How much does it cost a boy or a girl aged 14 to join?		X				

Unit	Lesson	No.	Page	Question	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
				4- Your bicycle is damaged by a car. Can the association help you?		X				
				5- How often do you get news from the association?		X				
		10	69	Ways with words (11).			X			
15	1	2	70	a: You are lost in the desert. As your camel runs away, seven of the objects below fall off its back. Which seven would you most like to have, because they will be the most useful?						X
15	1	2	70	b: What can you do with each of them?				X		
		3	70	a: What about the rest of the class?	X					
				b: Can you agree with them on the seven most useful objects? (discussion).				X		
	4	70		Listen. Two people are speaking. Which of these sentences are true?		X				
	2	5	71	What is the name of each of these?		X				
	3	6	72	Look and say (7).			X			
		7	72	About you. Ask and answer questions from the table. (7)			X			
	4	8	73	Match each picture to one of the suggestions and say whether the people are following the advice or not (5).		X				
		9	74	Read these two letters. Which girl is enjoying her holiday, and which is not?		X				
		10	74	Remake the text by reading the parts in correct order.		X				
		2	75	1- In the English pantomime, is Aladdin played by a man or a woman?		X				
				2- What about his mother?		X				
				3- Did Aladdin work hard? Did his mother?		X				

Unit	Lesson	No.	Page	Question	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
				4- Was Aladdin's family rich?		X				
	1	3	75	5- Why did Aladdin want to be rich?		X				
	2	4	76	Listen. Two people are speaking. Which of these are they? Read this scene and act it		X				
		5	76	* Can you continue the story?			X			
				1- Does Aladdin get out of the hole?		X			X	
				2- What happened to the lamp?		X				
	3	6	77	3- What happens to Aladdin and his mother? Look and say (7).		X				
		7	77	About you. Ask your partner a question beginning with "How long"			X			
	4	8	78	Ways with words.			X			
		9	78	Remake the text by reading the parts in correct order			X			
		2	80	Here is a picture of an Arab playing a rababa. Make questions and answers about it from this table. (8)		X				
	4		80	Two people are speaking. Who are they?		X				
	2	5	81	* What did Beethoven use these instruments for?				X		
				1- a: Do you think Beethoven had a good father? 1- b: Why (not)?				X		
				2- Did Beethoven learn as much as you have learned, or more? 3- How long did he live?		X				X
				4- For how many years could he hear almost nothing? 5- What does "deaf" mean?		X				

Unit	Lesson	No.	Page	Question	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
				6- a: Could you rather have met Beethoven before 1802 or after? 6- b: Why?		X				
				7- a: In which century are we living now?	X					
				7- b: In which century will you be living when you are twenty-five years old? Look and say (4)	X		X			
	3	6	82	About you. Think of things which you or someone in your family did last year. Also think why they were done. Then report them to your class. Ways with words.			X			
	4	8	83	Talk about wall picture then describe						
	9	83		How many sentences can you make like the example? (13)			X		X	
	10	84		Choose the right meaning (a) or (b). Then make a sentence like the example (9). Ex. Diving board (a) it can dive (b) you can dive from one. A diving board is a board to which you can dive from.		X				
18	1	1	85	* What does the object in the middle of this picture do? 1- What do ordinary telephones and televisions need?				X		
	2	3	86	2- If schools in Africa have got very little money, why do they spend it on televisions? 3- What differences have solar cells already made to life in Jordan? 4- What questions would you ask a scientist about solar energy? 5- Can you think of any new uses for the sun's energy? Look and say (7). What would you do (5)?		X		X		
	3	4	87				X			
	5	87					X			X

Unit	Lesson	No.	Page	Question	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
	4	6	88	* Look at the eyes of the person next to you. What colour are the pupils? * Compare the pupils' size before and after looking at light for about 30 seconds. * How have the pupils changed after looking under a desk for 30 seconds? * Why do people wear sunglasses?	X	X				
		8	89	Ways with words. The writer of one of these texts wants you to buy a car. The other writer is not trying to sell one. Which writer wrote which text? Ask and answer about this chart.		X				
19	1	1	90	* Do you feel the same as British children about these animals? * Are you more afraid of some other animals?	X				X	
		3	90	Find out how many of your friends are afraid of each thing and then colour in the correct number of squares.	X		X			
	2	4	91	* Why is one of the women in bed? * Who is the other woman? * What is she doing?		X				
				1- Did the young women notice the weather? 2- Why did she cry out?		X		X		
				3- How many needles were needed?	X					
				4- Did the doctor put them all in the same place? 5- Who invented acupuncture? 6- What does acupuncture do?		X				
						X				X

Unit	Lesson	No.	Page	Question	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
				7- Should the doctor have explained to the young woman before she used the needles?				X		
	3	5	92	Look and say. Make questions with words from A, and answers with words from B (7).			X			
		6	92	Think about your future. What do you wonder about? 1-2 sentences each?			X			
		7	92	Punctuation.			X			
	4	8	93	Ways with words.			X			
		9	93	Make the story by reading the parts in the correct order.						
		11	94	Discussion: How do you make friends with someone?		X				
20	1	1	95	1- What does "SEA" mean?		X		X		
				2- Who collects the forms?	X					
				3- When are they collected?	X					
				4- What sort of things do you think would SEA like passengers to tell them?		X				
		2	95	This is how one passenger filled in the form. Make questions and answers about it.						
				Compare exercise 2 with one in the WB. Compare the passengers' answers. Which of them had a better flight?		X				
		2	4	1- What is the passenger doing?					X	
				2- Does this often happen?		X				
				3- Who are the other people in the picture and what are they doing?						
	3	5	97	Look and say (6).				X		
				What about you? (7)			X			
		6	96				X			

Unit	Lesson	No.	Page	Question	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
	4	7	98	What does each of these signs mean? Where might you see them? (8)	X					
		8	98	Talk about wall picture then write the story?					X	
		9	99	Ways with words. The man's foot is hurting the lady's foot. Which of these are polite things she can say?						X
		10	99	Some of Arab proverbs have the same meaning as English ones. Can you match these? (7)		X				
21	1	1	100	Without looking at each other maps, give each other directions.		X				
		2	100	You are Nimer. Find the way to Akram's house.			X			
		3	101	1 - What sort of person was John? 2 - Were his friends like him?				X		
								X		
	3	4	102	Give your opinion about each of them. Find out if your partner's opinion is the same.			X			
		4	102	Give your opinion about each of them. Find out if your partner's opinion is the same.			X			

Unit	Lesson	No.	Page	Question	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
		5	102	Borrow these things from someone in your class, then ask someone to lend you things.			X			
	4	6	103	Read about these people then compare yourself with them. (5)		X				
		8	104	Ways with words.			X			
		9	104	Make the story by reading the parts in the correct order.		X				
		10	104	Composition						
22	1	1	105	1- Make sentences about the other drawings like the example. (4)			X		X	
				2-a- Which of these five materials is the easiest to fold?	X					
				2-b- Which is the hardest?	X					
		2	105	Make a balloon according to the picture below.			X			
		3	106	Look and say.			X			
		4	106	About you. Tell the class about your life when you were in grade 4.			X			
	3	5	107	Ways with words.			X			
		4	107	Talk about wall picture then write the story.			X			
		6	107						X	

Unit	Part	Page	Question	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
R1	a	1	Choose the word for the biggest thing and write it.(8)	X					
	b	2	About you .Answer the questions.(16)	X					
	c	3	Write the numbers in the squares.(21)	X					
	d	4	Make one sentence from each pair. using either "although" or "but".(5)			X			
	e	4	Talk about the differences between Picture A and Picture B.					X	
	f	5	In your notebook, write questions and answers about this picture, like the examples.(8)			X			
	g	5	Read this silently, then answer the questions.						
			1- What was good and bad about feathers?		X				
			2- What was wrong with elephants?		X				
			3- Are silver and gold metals?	X					
			4- a: Which were better than money, shells or cows?		X				
			4- b: Why?		X				
			5- You are telling someone how to make money. Which of these would you say?		X				
	h	6	Finish these sentences with so or because. (6)			X			
	I	6	Write the correct form of each verb in (). (10)			X			
	j	7	Write one word in each gap. Use each of these words once (13)			X			
1	a	8	Describe this picture in your own words.					X	
	b	8	Look at the picture above and fill in the blanks (8)					X	
	c	9	Find the right word (s) in each box and cross the wrong one(s) out. (15)	X					
	d	9	Puzzler. Which boy is the nurse talking to the teacher about? Put a		X				
	e	9	Punctuation			X			
	f	10	Write about a time when you were ill.					X	
	g	10	Remember, and make sentences from the tables in your notebook.					X	

Unit	Part	Page	Question	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
	h	10	Match them for meaning. (5)					X	
	i	11	Read the broken sentences, then write them correctly. (5)					X	
2	a	11	Look at the pictures. Read the words. Then describe the accident in your own words.					X	
	b	12	Look at the pictures in exercise a, on page 11, and fill in the blanks. (5)					X	
	c	12	Find the right word (s) in each box and cross the wrong one(s) out. (16)	X					
	d	13	Think about a time when the weather was important and write about it in your notebook.					X	
	e	13	Remember, and make sentences from the tables in your notebook. (12)					X	
	f	13	Pronunciation. (10)			X			
	g	13	Match them for meaning. (5)					X	
3	a	14	This plan shows where the backpacker meant to go. Compare it with the map on page 11 of the student Book. Where did he go wrong? Why was he late?				X		
	b	14	Look at the map above and fill in the blanks. (9)					X	
	c	15	Find the right word (s) in each box and cross the wrong one(s) out. (13)	X					
	d	15	Puzzler. Which way did Carol and Lisa go?		X				
	e	16	Punctuation. Write this again adding the correct capital letters.			X			
	f	16	Complete the key to this map. (7)	X					
	g	16	Remember, and make sentences from the tables in your notebook. (11)					X	
	h	17	In your notebook, write these 4 headings, then write each of these verbs and the correct heading.					X	
	I	17	Match them for meaning. (6)					X	

Unit	Part	Page	Question	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
4	a	18	Describe this picture in your own words.					X	
	b	18	Look at the picture above and fill in the blanks (6)					X	
	c	19	Find the right word (s) in each box and cross the wrong one(s) out. (10)	X					
	d	20	Write completely different sentences that have the opposite of the underlined words in them. (5)					X	
	e	20	Read the broken sentences, then write them correctly. (5)					X	
	f	20	Remember, and make sentences from the tables in your notebook. (19)					X	
	g	21	Which is more interesting, orienteering or baton marching? Write about 5 sentences in your notebook. These questions may help you.(5)					X	
	h	21	Match them for meaning.(5)					X	
	i	21	Pronunciation. (10)					X	
5	a	22	Describe this picture in your own words.			X			
	b	22	Complete these sentences with noise, sound or voice. (7)			X		X	
	c	23	Find the right word (s) in each box and cross the wrong one(s) out. (10)	X					
	d	23	Puzzler. Listen (1) Aled Jones is talking to a reporter. Write the information he gives in this table. (2) Write about the recordings in your notebook like this. (3)	X					
	e	24	Punctuation. Put in the capitals and " " .						
	f	24	Complete the conversation with the correct one of the following: anything, nothing or something. (9)			X			
	g	24	Remember, and make conversations from the tables in your notebook. (13)			X			
	h	25	In your notebook, write these 2 headings, then write each of these words under the correct heading. (24)					X	
								X	

Unit	Part	Page	Question	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
	i	25	Match them for meaning. (4)						
R2	a	26	Listen to the instruction, choose the correct word, and then write it. (8)	X				X	
	b	27	Finish the report of this conversation. (7)					X	
	c	27	Look at the Remember Table on pages 20 and 21 of the Workbook again. Then make one sentence from each of these pairs. (6)			X			
	d	28	Complete these sentences with one of the following :anything, nothing or something. (6)			X			
	e	28	Punctuation. Write this letter again adding the correct capital letters.			X			
	f	28	This paragraph compares Wales with Scotland. Read it, then write another paragraph to compare Scotland with Wales.					X	
	g	29	Aled's mother is speaking. Complete each of her sentences with one of these: had better or would rather. (6)			X			
	h	30	Read each paragraph and match it to the correct picture. (4)		X				
6	a	31	a: Compare this picture with the one on page 26 of the Student Book. Which shopkeeper made more mistakes when he wrote his notices?	X					
			b: What were the mistakes each made?	X					
	b	31	Write about these signs, saying what is wrong with each of them. (5)					X	
	c	32	Write one word in each gap. It must agree with the text in the Student Book. (10)		X				
	d	32	Pronunciation. (5)			X			
	e	33	Make sentences about the picture from the frame. Write them in your notebook. (8)			X			
	f	33	In your notebook write these 3 headings. Then write each of these words. (23)					X	X

Unit	Part	Page	Question	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
	g	34	Remember, and make sentences from the tables in your notebook. (15)					X	
	h	34	Match them for meaning. (5)					X	
7	a	35	Tell your partner how the horse (on page 31 of the Student Book) was made. (Some useful words are given to you.)					X	
	b	35	Complete these sentences about the pictures above. (7)					X	
	c	36	Find the right word(s) in each box and cross the wrong one(s) out. (10)	X					
	d	36	Listen and do.			X			
	e	37	Remember, and make sentences from the tables in your notebook. (16)					X	
	f	37	Match them for meaning. (6)					X	
	g	38	Punctuation. Write this conversation in your notebook, putting in the right punctuation.			X			
	h	38	A reporter is asking an archaeologist some questions. Write his questions, like the example. (4)					X	
8	a	39	Jordan is described in the table below. Compare it with Thailand which is described on page 36 of the Student Book.					X	
	b	39	Complete these sentences. (6)	X					
	c	39	In your notebook, Write a paragraph about Jordan. Use the text on page 36 of the Student Book as a model.					X	
	d	40	Pronunciation.			X			
	e	40	Read the example and write definitions for the other words. (4)					X	
	f	41	Composition. Describe a game which is played in Jordan. These questions will help you.					X	
	g	41	Remember, and make sentences from the tables in your notebook. (14)					X	

Unit	Part	Page	Question	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
	h	41	Arabic has given some words to the English language. Can you match these? (10)	X					
9	a	42	In Pairs, describe this drawing. Then write a description in one paragraph.					X	
	b	42	Look at the pictures and complete the sentences. (5)					X	
	c	43	Find the right word(s) in each box and cross the wrong one(s) out. (13)	X					
	d	43	Listen and answer the questions. (2)		X				
	e	43	Punctuation. The circus manager is speaking to his wife. Write their conversation in your notebook, putting in the right punctuation. Decide who says each sentence and write the name (circus manager or wife) in front of it (as in a play).			X			
	f	44	Last Friday Fadia took some photographs and has now written something about each one. Make her notes into full sentences, in your notebook, like the example (7).			X			
	g	44	Draw a line under all the subjects in these sentences. Draw two lines under all the objects. The first subject and object are already done.			X			
	h	45	Remember, and in your notebook make conversations and sentences from tables. (20)					X	
	i	45	Match them for meaning. (6)					X	
10	a	46	You are a travel agent. Your partner is a tourist who is going to ask you for information. Find this in the text below and give it to him/her. (21)	X					
	b	46	Complete each of these sentences with one word. (8)	X					

Unit	Part	Page	Question	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
	c	47	Find the right word(s) in each box and cross the wrong one(s) out. (10)	X					
	d	47	Pronunciation. (5)			X			
	e	48	Dictation. Complete this programme.			X			
	f	48	Think of five things that you ought to do, but don't usually do. Write one sentence about each, like the example, in your notebook. (5)					X	
	g	48	Composition. In your notebook, describe the right and wrong way of doing one of these things.					X	
	h	49	Remember, and make conversation from the tables in your notebook. (15)					X	
	i	49	For each word in A, find its opposite in B. (13)	X					
			For each word in C, find its opposite in D which can have similar meaning. (11)	X					
11	a	50	a: Do this at home and report when you come to your next lesson. Which ice cube melted first?			X			
			b: Which melted last?						
	b	50	Write a report of your experiment with the coloured cards, by filling the gaps with suitable words. (18)					X	
	c	51	Listen and answer the questions. (3)		X				
	d	51	Punctuation.						
	e	51	Write a suitable question in front of each answer, like the example. (5)			X			
	f	52	Remember, and make sentences from the tables in your notebook. (4)			X			
	g	52	Word study. Each word in A can go in front of a word in B and make a word with a different meaning. Match them. (12)	X				X	
R3	a	53	Listen to the instruction, choose the correct word, and then write it. (6)	X					
	b	54	Look at the pictures and read the words. Then write "The Story of Muna's Book"					X	

Unit Part	Page	Question	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
c	55	Finish each of these sentences with (who or which), or write nothing if no word is needed.(10)			X			
d	55	Make 5 more pairs of good sentences from the table .(5)					X	
e	56	Write one of these words in each gap . Use each word only once.(18)		X				
f	57	Write the card Vicki wrote to her brother Tom for the second day.					X	
12 a	58	With your partner, look at these objects. What colours do you think each should be? When you have agreed, report your choices to the class. (10)	X					
b	58	In your notebook write down all the colour words you found when you read page 56 in the Student Book. (9)	X					
c	58	Finish this conversation between two of the scientist's friends after the meal. (13)					X	
d	58	Pronunciation.			X			
e	59	Do you remember how you learnt to write English? Write the method, using these sentences, but make the underlined words the subjects of your sentences. (3)			X			
f	59	Remember, and make sentences from the tables in your notebook. (14)					X	
g	60	Crossword (16)	X					
13 a	61	Answer your partner's questions about the journey shown on this map.					X	
b	61	Complete these sentences (10)		X				
c	62	Complete this chart with information about Sir Francis Chichester's life, like the example. (10)	X					
d	62	Listen, and write notes about these famous people, like the example. (3)		X				

Unit	Part	Page	Question	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
	e	63	Choose three of the people in Exercise d on page 62 and write about them like this. (3)					X	
	f	63	Write questions and answers about these pictures, like the example. (3)		X				
	g	64	Remember, and make sentences from the tables in your notebook. (19)					X	
	h	64	Read this description of Sir Francis Drake's journey in 1577-1580. Then look at the map on page 61 of your workbook, and write a description of Sir Francis Chichester's journey in 1966-1967 in your notebook.					X	
	i	65	a: A visitor from space drew this map of the world, but it isn't correct. What is wrong with it? b: Write as many sentences as you can, in your notebook.	X					
14	a	66	Follow the instructions in the Student Book and fill in this form so that you can become a member of the YHA. Also write an envelope to post it in. (9)	X					
	b	66	Look at this picture. Where is the best place for a campsite? Give three reasons for your answer. (3)				X		
	c	67	Next to each time below write something which happened in "The Missing Canoe". (6)		X				
	d	67	In your notebook, write four more questions and answers, like the example. (4)					X	
	e	67	Remember, and make sentences from the tables in your notebook. (8)					X	
	f	68	Dictation. Complete these campsite rules. (7)			X			
	g	69	Pronunciation.			X			
	h	69	Crossword (19)	X					

Unit	Part	Page	Question	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
15	a	70	a: In this table write the seven things you chose, and then say why you chose each of them.	X					
15	a	70	b: Also name three of the objects you didn't choose, and say why you didn't want them.						X
	b	70	Answer the questions after reading "Surviving in the Desert". Write the answers in your notebook. (8)		X				
	c	71	Listen and put ? under the correct picture in each pair. (6)		X				
	d	71	Look at the examples, then write if or in the correct gap in each sentence. (8)			X			
	e	72	Look at the label and read the paragraph. Then finish the two paragraphs about the other labels. (2)					X	
	f	73	Remember, and make sentences from the tables in your notebook. (9)					X	
	g	73	Look up these phrases in a dictionary under present, past and future. Then finish each sentence with one phrase. (5)			X			
16	a	74	Choose the words which best continue the story of Aladdin. (16)	X					
	b	74	Complete this scene from "Aladdin". (16)					X	
	c	75	Write as soon as in the correct space. (10)			X			
	d	76	Write sentences like the example, in your notebooks. (5)			X			
	e	76	Remember, and make sentences from the tables in your notebook. (15)					X	
	f	76	For each word in A, find its opposite in B. Write each pair of words in your notebook.	X					
	g	77	Look at the table on the left. Read Ahmed's story on the right. A-Make questions to match the answers. B- Write Sarah's story.	X				X	
17	a	78	Answer your partner's questions about these European instruments.					X	X

Unit	Part	Page	Question	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
	b	78	Complete this with one or more words in each space. (9)	X					
	c	78	Write the year next to each of these things which happened in Beethoven's life. (7)	X					
	d	79	Listen and draw what happened.			X			
	e	79	Remember, and make sentences from the tables in your notebook. (12)					X	
	f	79	In your notebook, write about each of these famous people, like the example. (4)	X					
R4	a	80	Study the pictures of someone making scrambled eggs. Then do the exercise below. (16)			X			
	b	81	Match each instruction with the correct picture. Then put the numbers of the sentences in the right order. (4)		X				
18	a	82	a: Match the names, a-f, to the pictures, 1-6. (6)	X					
	b		b: Then write a sentence about each one, like the example. (5)					X	
	b	82	Complete these conversations with suitable words. Usually more than one word is needed in each space. (14)					X	
	c	83	Read this advertisement for a weaving machine. Then write one like it for one of these: a sewing machine, a washing machine or a printing machine.					X	
	d	84	Crossword. (31)	X					
	e	85	Remember. Write sentences in your notebook from the third table only. (11)					X	
19	a	86	Write 5 more sentences like the example, using the chart in your notebook. (5)					X	
	b	86	Find the correct word(s) in each box and cross the wrong one(s) out. (12)	X					

Unit	Part	Page	Question	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
	c	86	Listen. Four children want to choose a pet which all of them will like. Only one of the animals in this chart is suitable. Which one? (Put X against an animal when you hear it is not suitable). (5)		X				
	d	87	Read this extract from a camp diary. Then rewrite each sentence like the example. Use your notebook. (5)			X			
	e	87	You won't understand all of this advertisement, and you don't need to. Read what you can, then complete the sentences with one word in each space. (10)		X				
	f	88	Remember, and make sentences from the tables in your notebook.					X	
	g	88	Look at the examples, then write the missing words in the tables. (8)	X					
20	a	89	With your partner. Compare this passenger's answers with those in the form on page 95 of the Student Book. Which passenger had a better flight? (10)						X
	b	89	Match these initials with the names of the airlines. Then make a list of all the initials in alphabetical order, in your notebook.	X					
	c	90	Some of these sentences are true. Correct the others, so that they mean the same as "Flying for R" (Student Book, page 96). (8)		X				
	d	90	All these things have happened in Malinee's life. Put them in their correct order in time. Write 1-7 in the boxes. (7)	X					
	e	91	Read and match. (6)	X					
	f	92	Remember, and make sentences from the tables in your notebook.					X	
	g	92	Look at the examples, then write the missing words in the tables. (15)	X					
21	a	93	You are Akram. Find the way to Nimer's house.			X			

Unit	Part	Page	Question	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
	b	93	Some of these sentences are true. Correct the others, so that they mean the same as "Three Men in a Caravan" (Student Book, page 101). Write the correct sentences in your notebook. (10)		X				
	c	94	All these things happened to the three men. Put them in their order in time. Write 1-8 in the boxes. (8)	X					
	d	94	Remember, and make sentences from the tables in your notebook. (4)					X	
	e	94	Look at the examples, then write the missing words in the tables. (8)	X					
22	a	95	Complete this conversation between two Frenchmen in 1783. (9)					X	
	b	95	Word study. Pair each of the words on the left with its opposite on the right. (15)	X					
	c	96	Remember, and make sentences from the tables in your notebook. (12)					X	
	d	96	An old man is describing his life when he was young. Change the verbs to "used to" + base verb, if this can be done correctly. (14)			X			

Page No.	Question	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
	Comprehension Questions						
15	1 Why was Ibn Batuta called (traveller of the Arabs)?	X					
15	2 How were the dangers for religious travellers lessened?	X					
15	3 Why do you think Ibn Batuta compared himself to a bird leaving its nest?		X				
15	4 Why was he surprised at what the voice said to him?	X					
15	5 a: How did John Paleologus feel when he spoke to Ibn Batuta ? a) happy b) proud c) angry d)sad.			X			
15	5 b: Give reason for your answer.			X			
15	6 Describe in your own words how the Emperor of India's post was delivered					X	
15	7 Why were the Emperor of India's presents lost?	X					
15	8 Which country did Ibn Batuta like best?	X					
	True or false questions						
18	1 Pearls are found in shells at the bottom of the sea.	X					
18	2 The Golden Horn is a famous mosque in Constantinople.	X					
18	3 The Yogi climbed up the rope and disappeared.	X					
18	4 When Urduga killed the king, her army ran away.	X					
18	5 Porcelain is made of earth.	X					
18	6 In China silk is so expensive that only rich people can wear it.	X					

Page No.	Question	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
	Find words in the story that mean the following:						
18	1 A group of people traveling together	X					
18	2 Clever	X					
18	3 Men who sail in ships	X					
18	4 Go back to.	X					
18	5 The ruler of an empire	X					
18	6 Silk worms eat the leaves of the tree.	X					
	Role play						
18	1 Work with your partner. One of you is a pearl diver, the other is a reporter. The reporter interviews the pearl divers and asks him about his work.			X			
18	2 You are one of queen Urduja's soldiers. Describe the battle as you saw it.					X	
	Writing						
19	1 Write the conversation between Ibn Batuta and the Emperor of Constantinople as if it were a scene from a play.					X	
19	2 Write a reply to either of Ibn Batuta's letters to his friends.					X	

Page No.	Question	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
	Comprehension Questions						
30	1 Why did the Crusaders travel to Palestine?	X					
30	2 Why was Salah Ud-Din's father angry with him?	X					
30	3 How did Reynold of Chatillon break the truce with Salah Ud-Din?	X					
30	4 Who led the Crusader armies after Salah Ud-Din liberated Jerusalem?	X					
30	5 How did Salah Ud-Din treat King Richard like a friend?		X				
30	6 How did we know that Salah Ud-Din was poor when he died?		X				
	True or False						
31	1 Salah Ud-Din liberated Jerusalem in the year 1099.	X					
31	2 He became ruler of Egypt in 1171.	X					
31	3 Salah Ud-Din's dream came true in 1187.	X					
31	4 When Salah Ud-Din liberated Jerusalem, the war with the Crusaders ended.	X					
31	5 King Richard's dream never came true.	X					
31	6 He signed a truce with Salah Ud-Din and went home.	X					

Page No.	Question	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
	Find words in the story that mean the following						
31	1 Someone who travels to a place because of his religion.	X					
31	2 Sacred.	X					
31	3 Very surprised.	X					
31	4 Working together and sharing the same ideas.	X					
31	5 Agreement not to fight.	X					
31	6 To promise to do something and then do it.	X					
	Role Play						
31	1 You and your partner are counsellor to Salah Ud-Din. Advise him what to do with Reynold of Chatillon. One of you should argue for killing him, the other for releasing him.			X			
	Writing						
32	1a Work with your partner to rewrite the scene between Salah Ud-Din and his father as a scene from a play.					X	
	1b When you have written this scene, act it out with your partner.			X			
32	2 Write a letter from King Richard to Salah Ud-Din thanking him for helping him when he was ill.					X	

No.	Question	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
	Comprehension Questions						
46 1	Why did Ibn Khaldun leave Tunis?	X					
46 2	Why did Ibn Khaldun's enemies in Fez not like him?		X				
46 3	What happened to Ibn Khaldun when Abu 'Inan died?	X					
46 4	Why did Muhammad want Ibn Khaldun to visit the king of Castille?		X				
46 5	Why did Ibn Khaldun go to live in a small town in Algeria?		X				
46 6	How do we know that the Muqaddima was an important book?		X				
46 7a	In which city was Ibn Khaldun happiest?	X					
46 7b	Why?		X				
46 8	What happened to end his happiness?	X					
46 9	What did Faraj ask him to do?	X					
46 10	How did Ibn Khaldun get out of Damascus to meet Timur Leng?	X					
46 11	What did Ibn Khaldun and Timur Leng talk about?		X				
46 12	Where did Ibn Khaldun die?	X					
	True or False						
47 1	Ibn Khaldun's parents died when he was seventeen.	X					
47 2	Abu 'Inan sent Ibn Khaldun to prison.	X					
47 3	After two years Abu 'Inan set Ibn Khaldun free.	X					
47 4	King Pedro gave Ibn Khaldun a house and a land in Castille.	X					
47 5	Ibn Khaldun wrote the Muqaddima in Algeria.	X					

No.	Question	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
47	6	Ibn Khaldun thought that it was better for people to work together.	X				
47	7	Timur Leng did not want to speak to Ibn Khaldun .	X				
47	8	Ibn Khaldun arranged a peace treaty between Faraj and Timur Leng.	X				
		Find words in the story that mean the following					
47	1	Someone who studies history.	X				
47	2	Unhappy because someone else is luckier than you.	X				
47	3	Set free.	X				
47	4	Someone who speaks for a king or a country.	X				
47	5	Killed by water.	X				
47	6	Talked about.	X				
		Role Play					
48	1	Work with your partner. One of you is an enemy of Ibn Khaldun at Fez called Salim, the other is Abu 'Inan. Salim tries to persuade the king that Ibn Khaldun is plotting against him, the king at first refuses to listen and then believes Salim.		X			
		Writing					
48	1	You are Ibn Khaldun . Write a letter to a friend explaining why you have decided to give up politics, leave Spain, and write a book.			X		
48	2	Work with your partner to write the conversation between Faraj and Ibn Kaldun as a scene from a play.				X	

Figure 2: Total Percentages Per Each Taxonomy for the Total Questions in the Three Textbooks

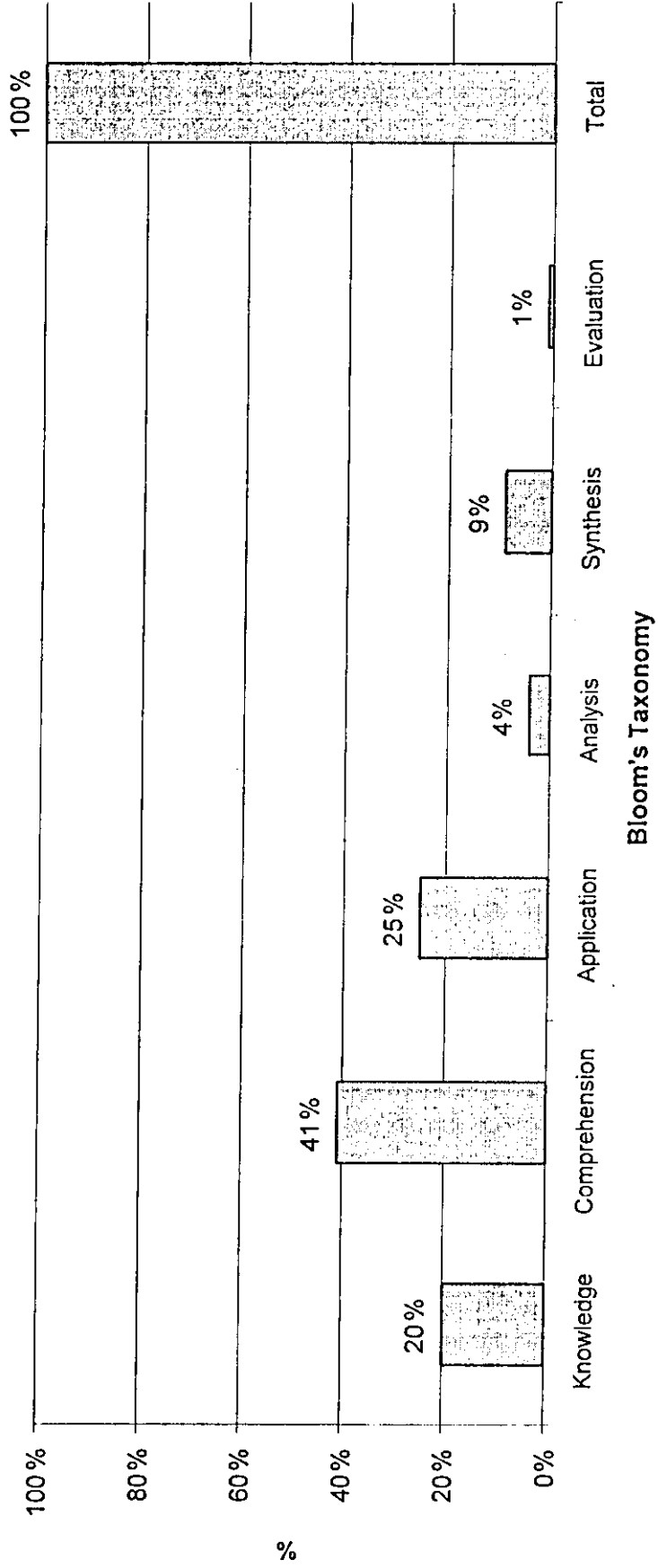


Figure 3: Total Percentages Per Each Taxonomy for the Total Questions in the Three Textbooks

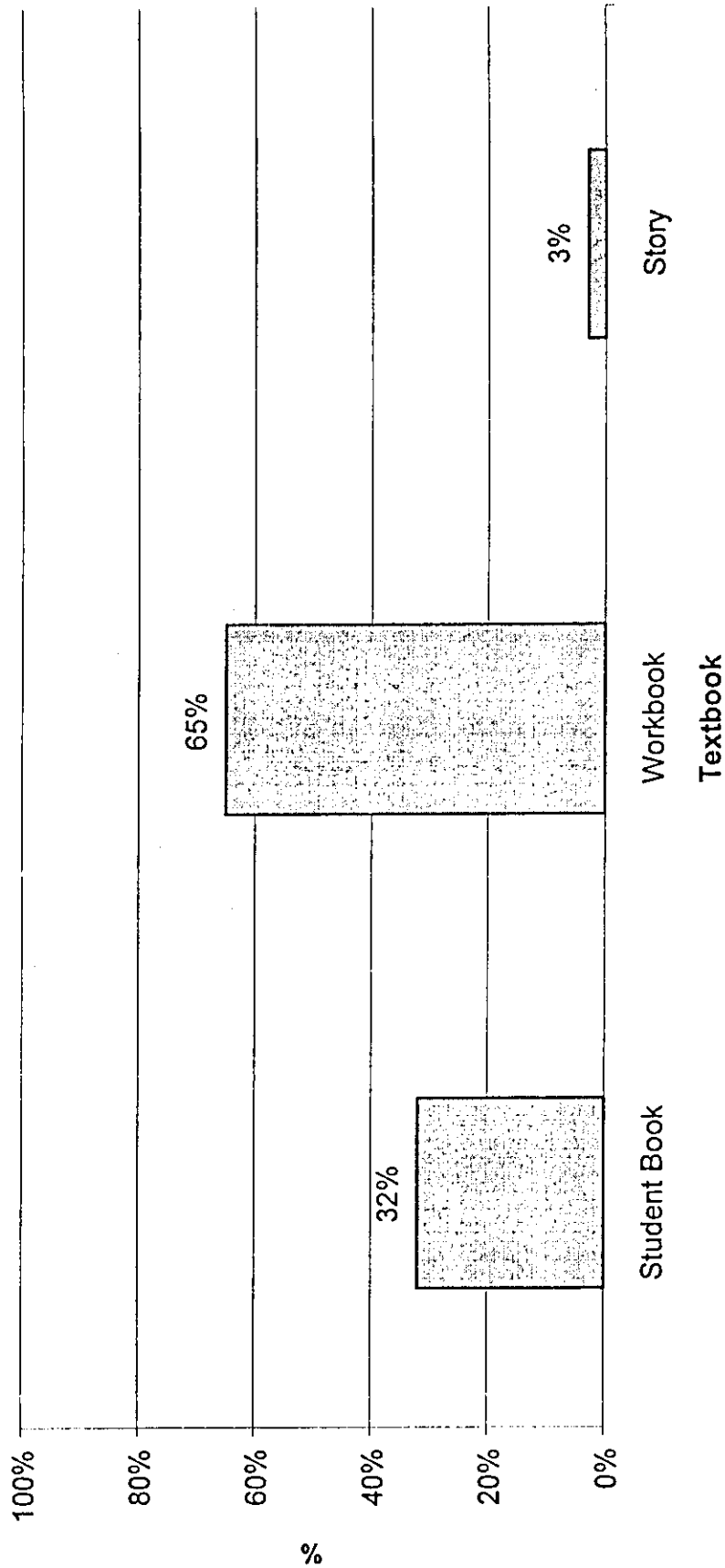


Figure 4: Number of Questions Per Knowledge Taxonomy for the Student Book

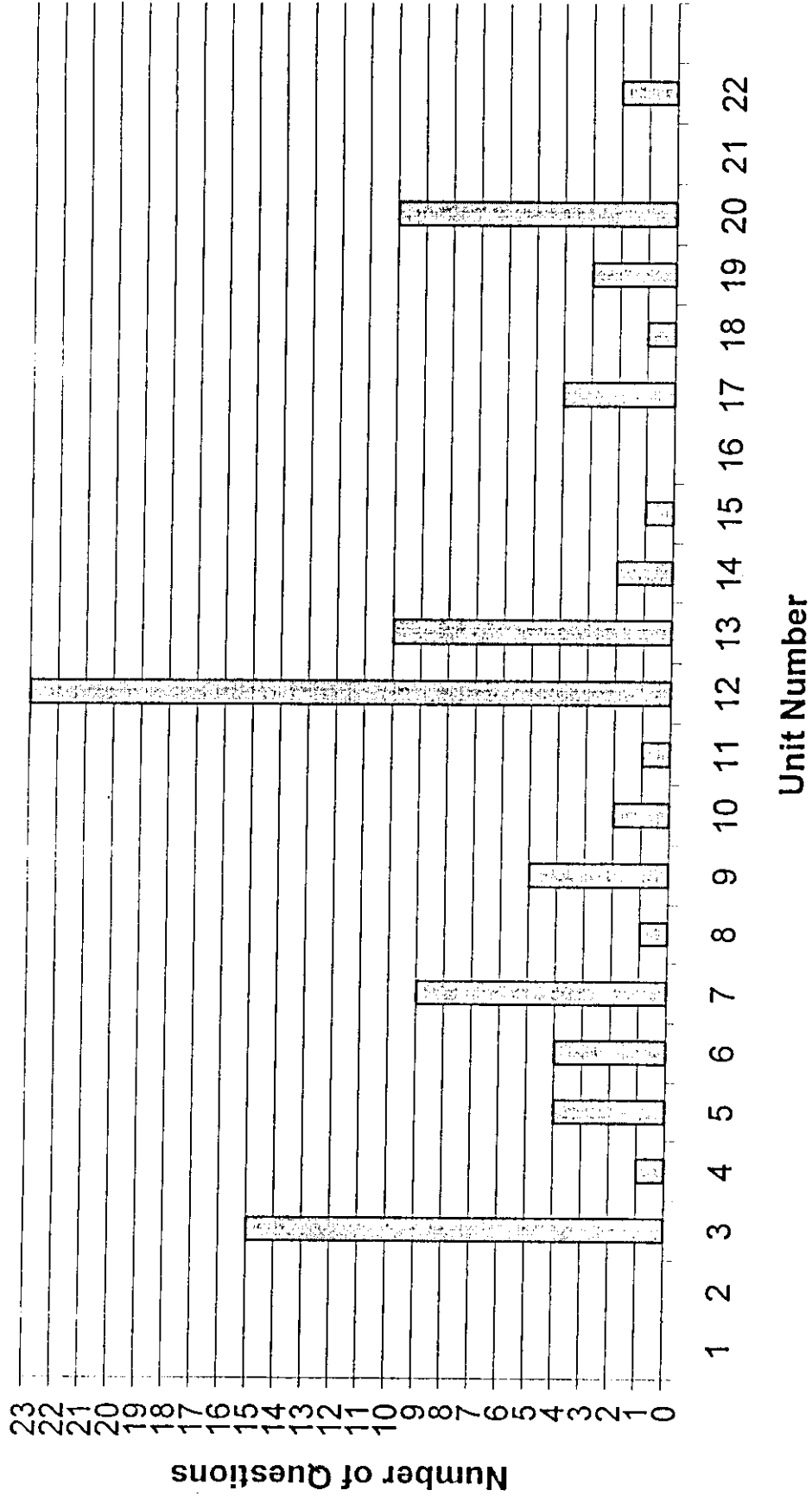


Figure 5: Number of Questions Per Comprehension Taxonomy for the Student Book

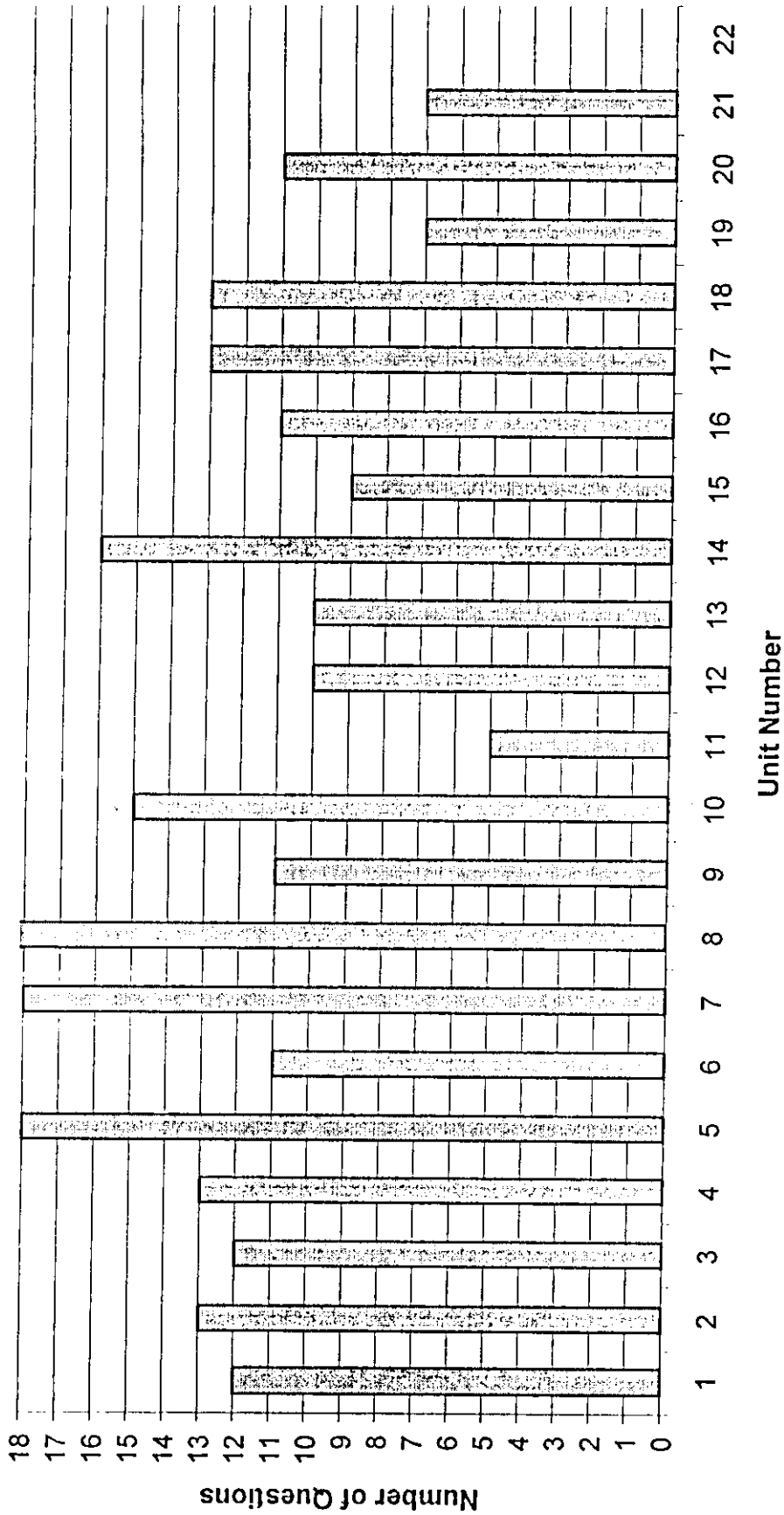


Figure 6: Number of Questions Per Application Taxonomy for the Student Book

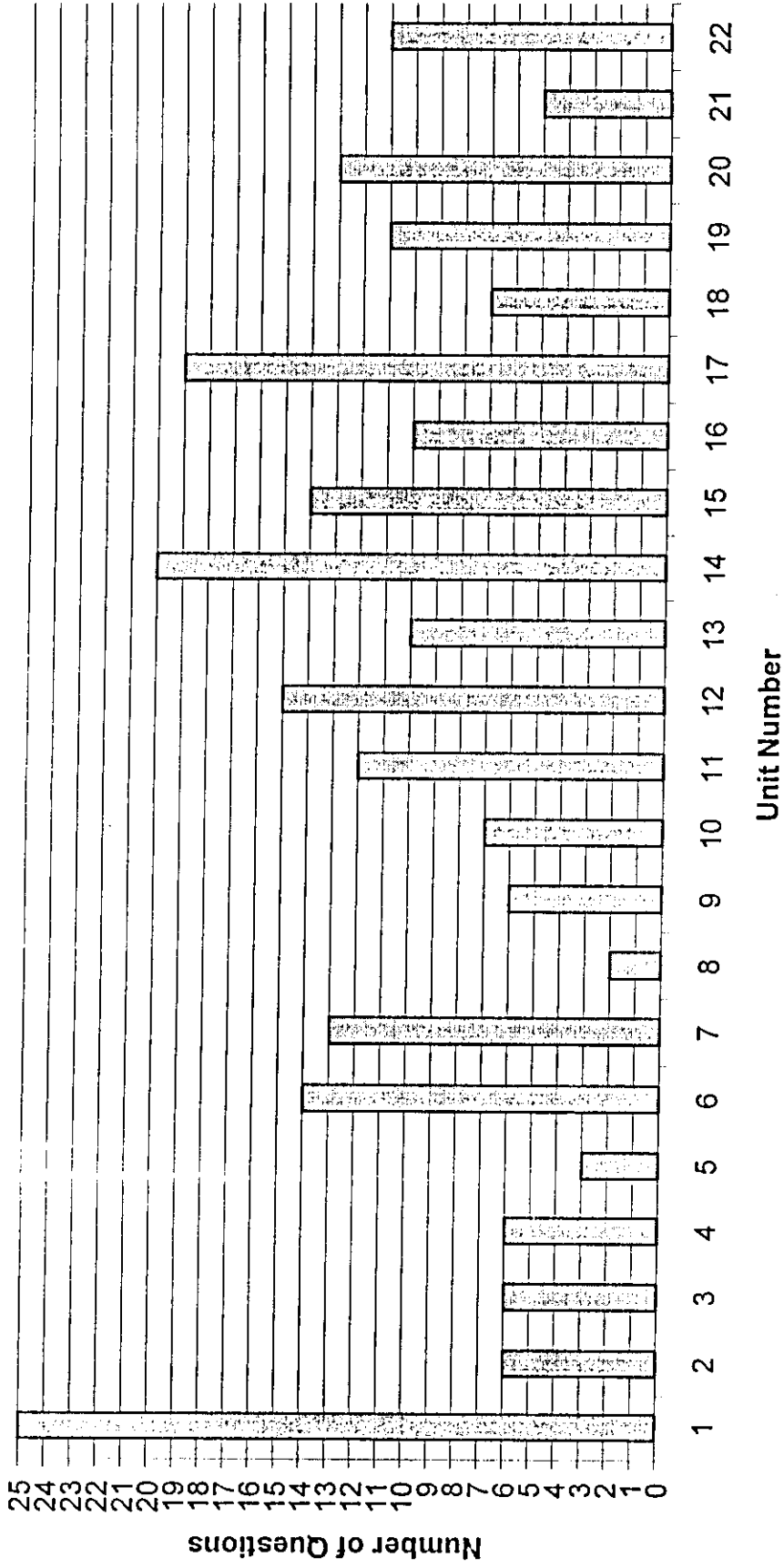


Figure 7: Number of Questions Per Analysis Taxonomy for the Student Book

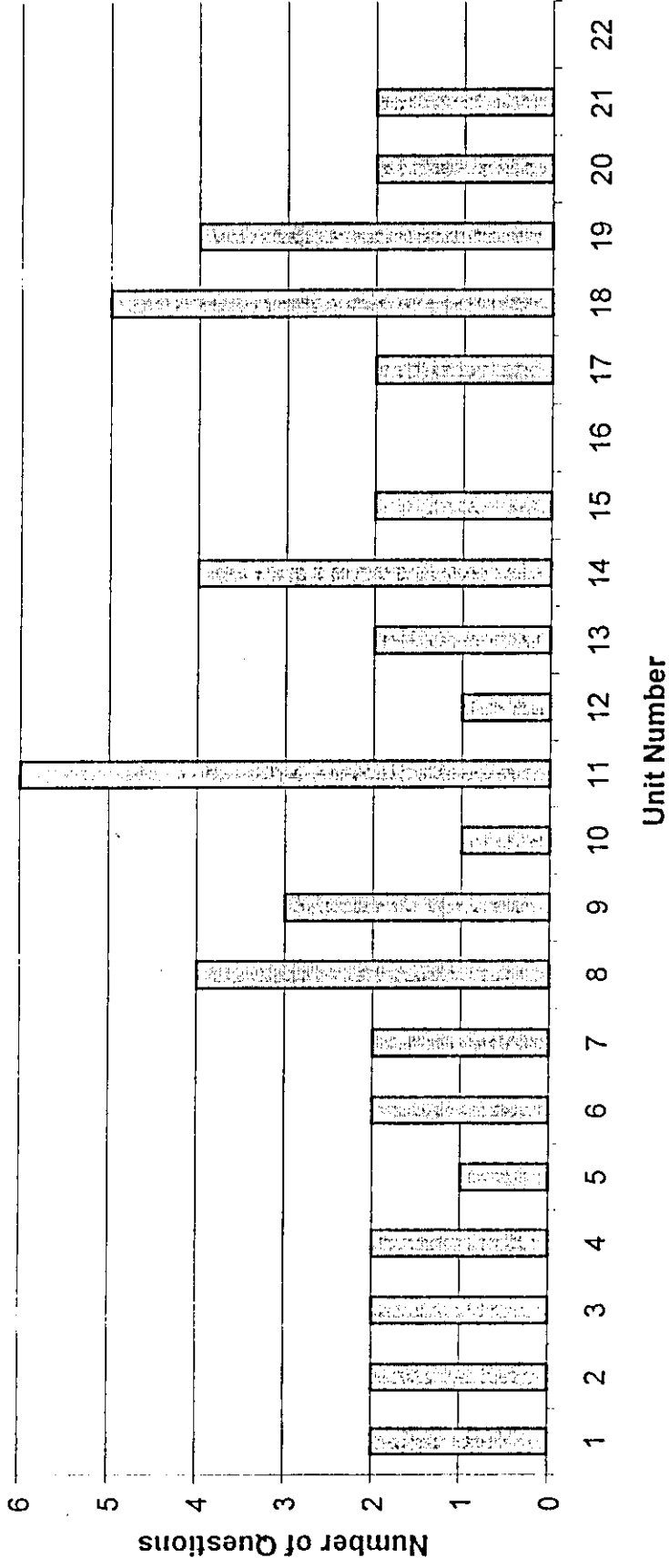


Figure 8: Number of Questions Per Synthesis Taxonomy for the Student Book

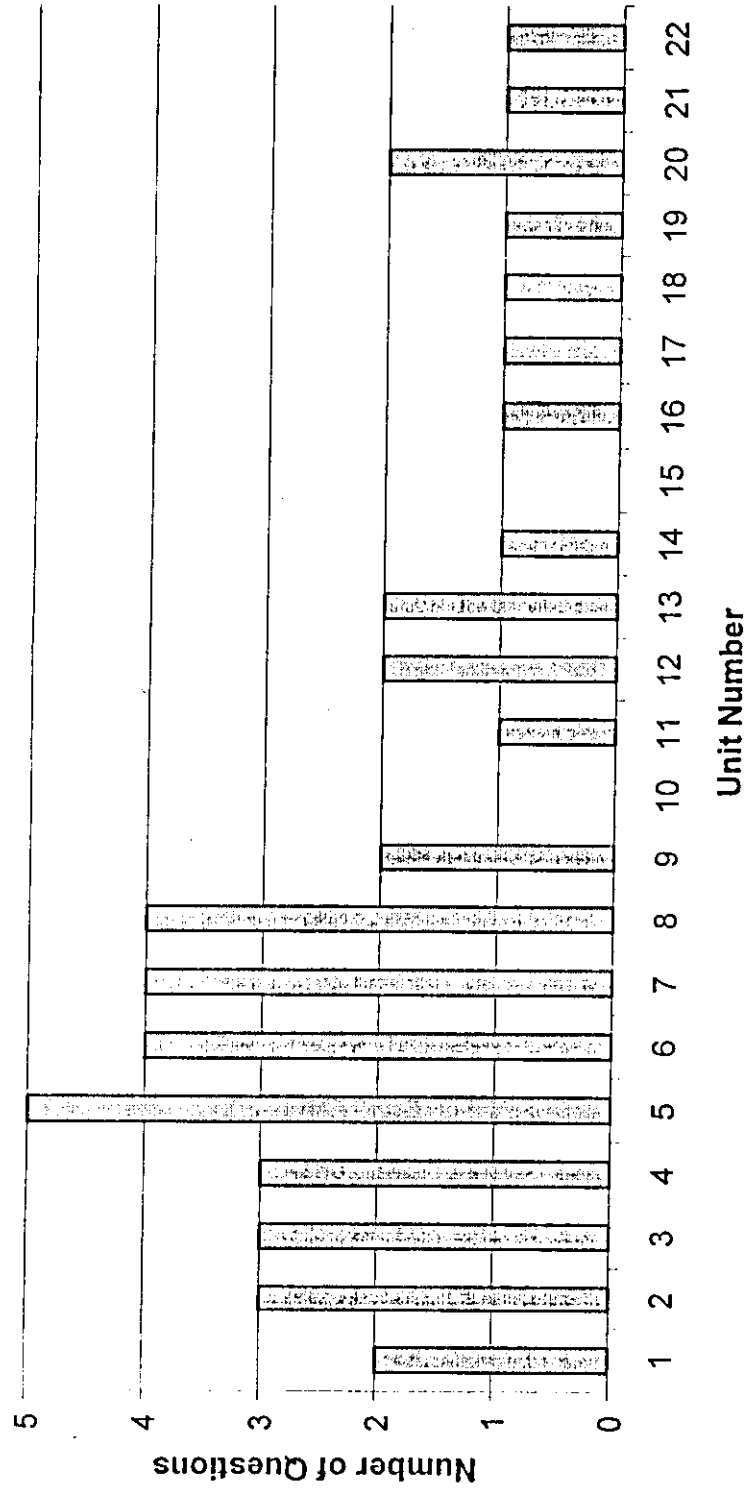


Figure 9: Number of Questions Per Evaluation Taxonomy for the Student Book

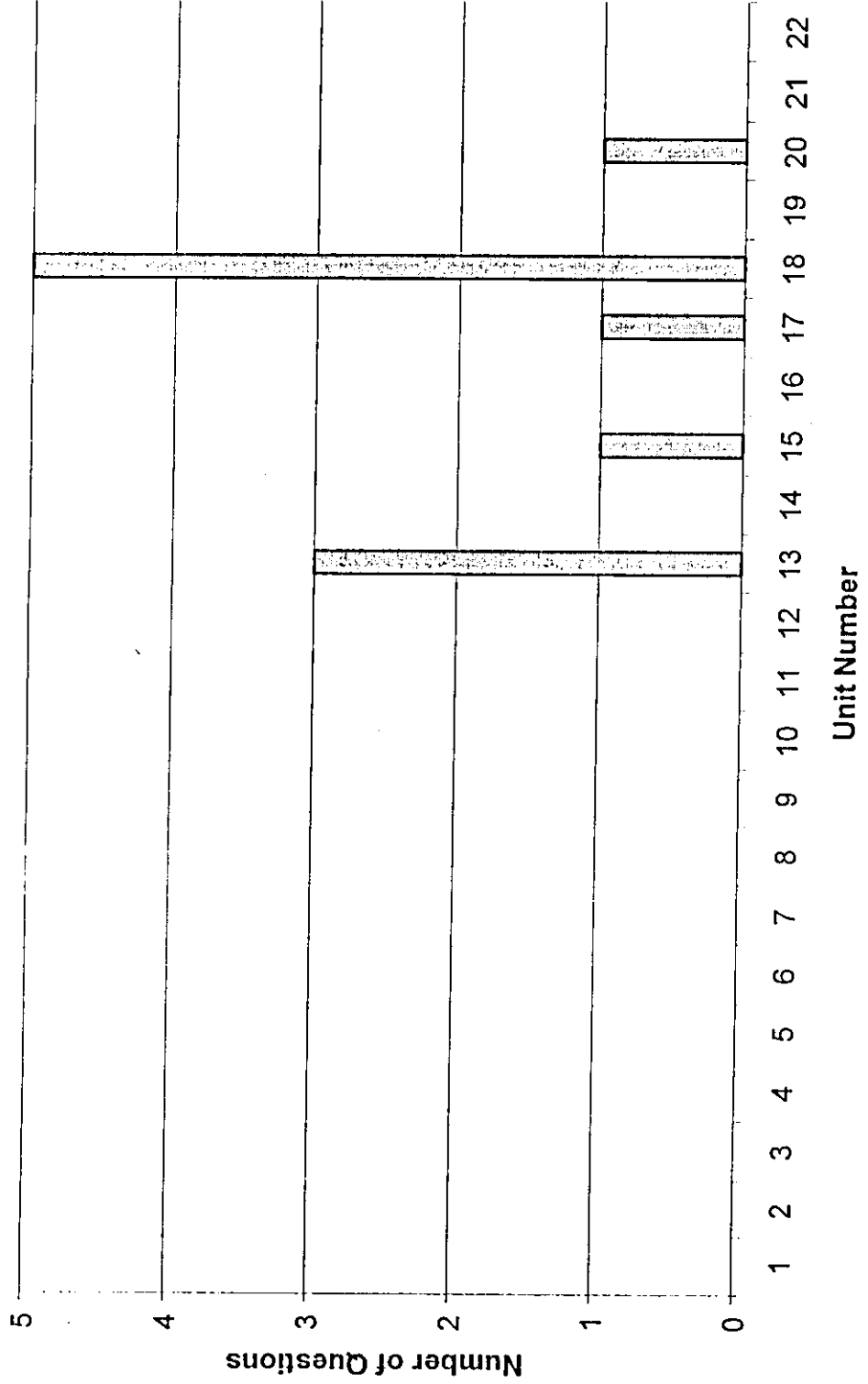


Figure 10: Number of Questions Per Knowledge Taxonomy for the Workbook

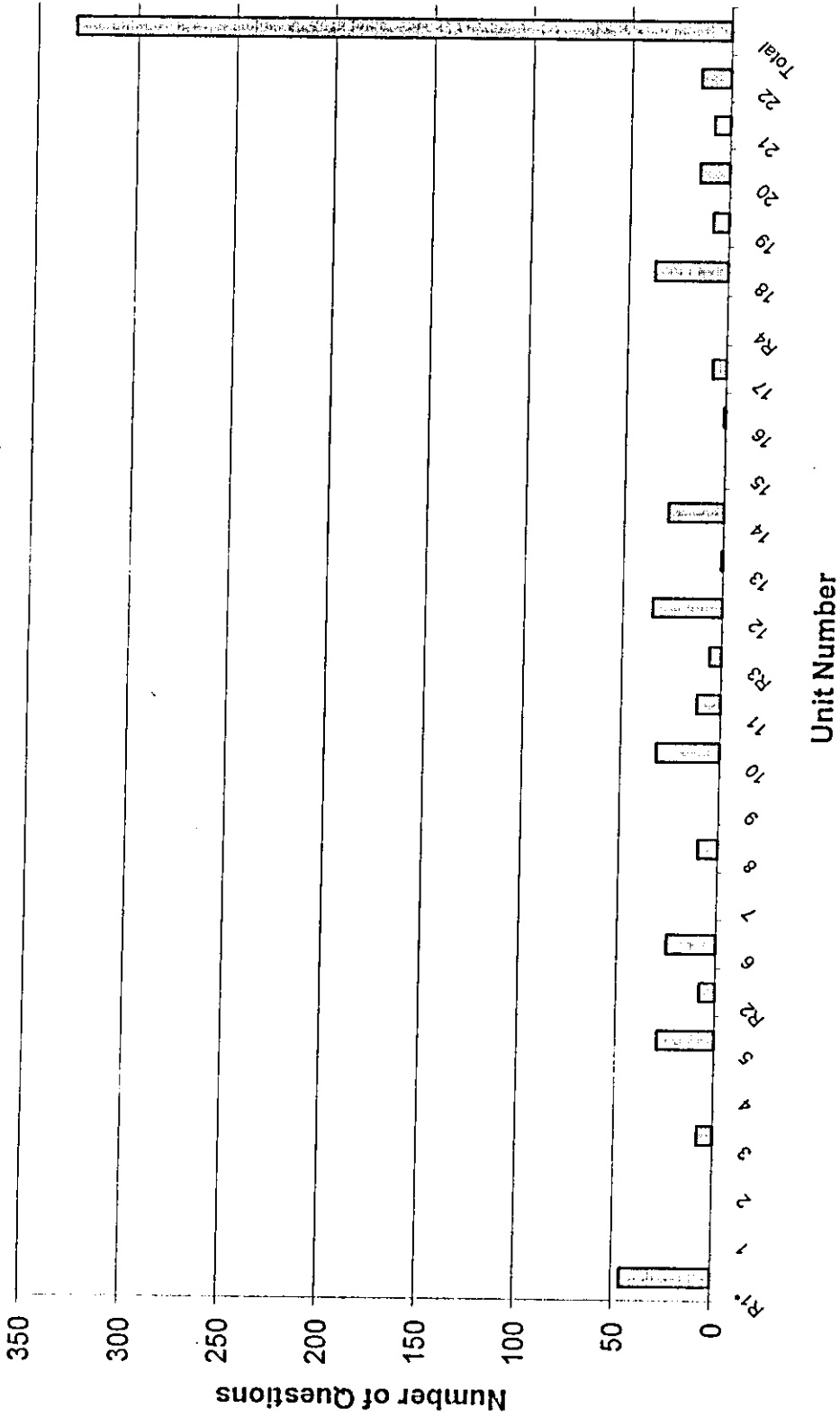


Figure 11: Number of Questions per Comprehension Taxonomy for the Workbook

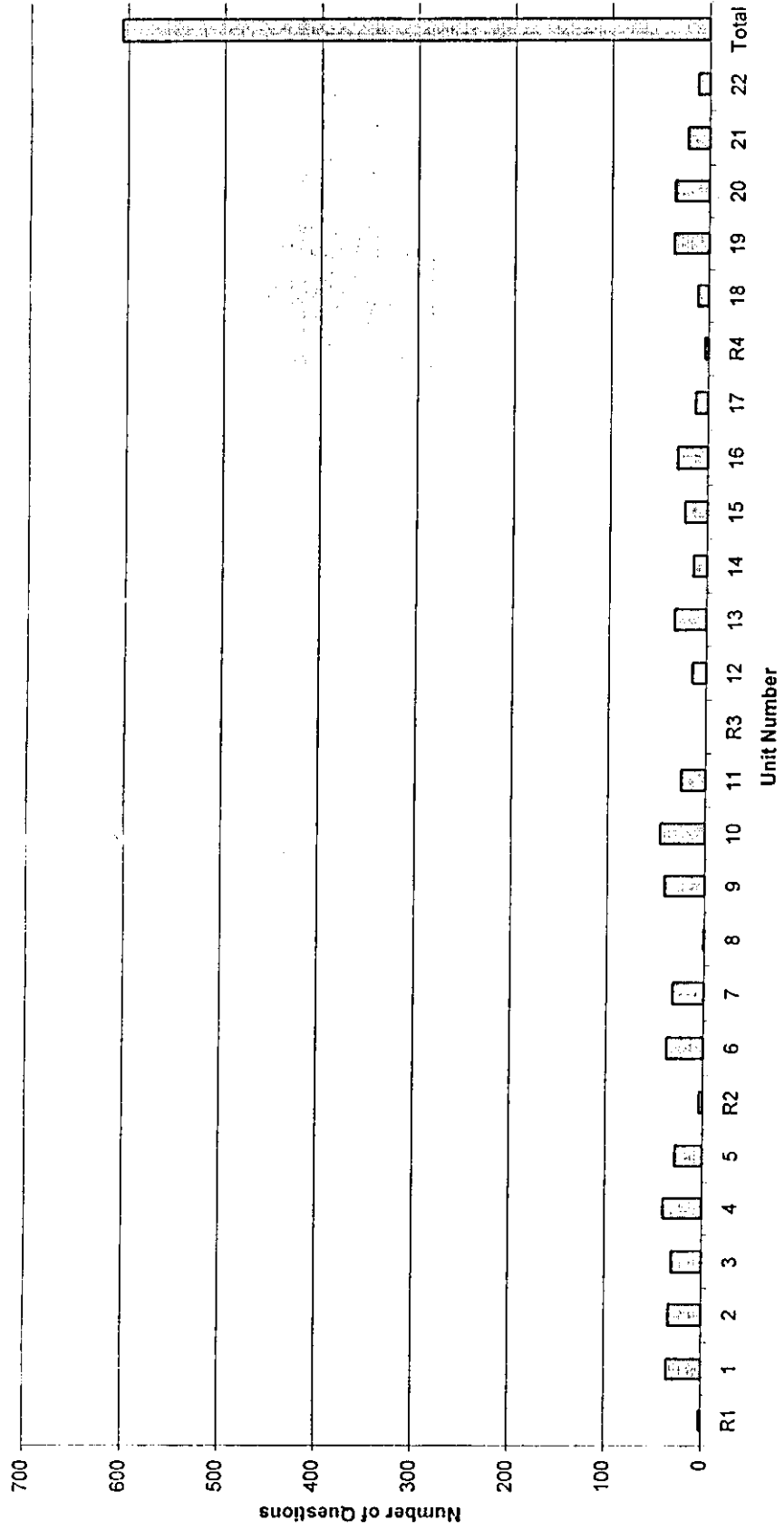


Figure 12: Number of Questions per Application Taxonomy for the Workbook

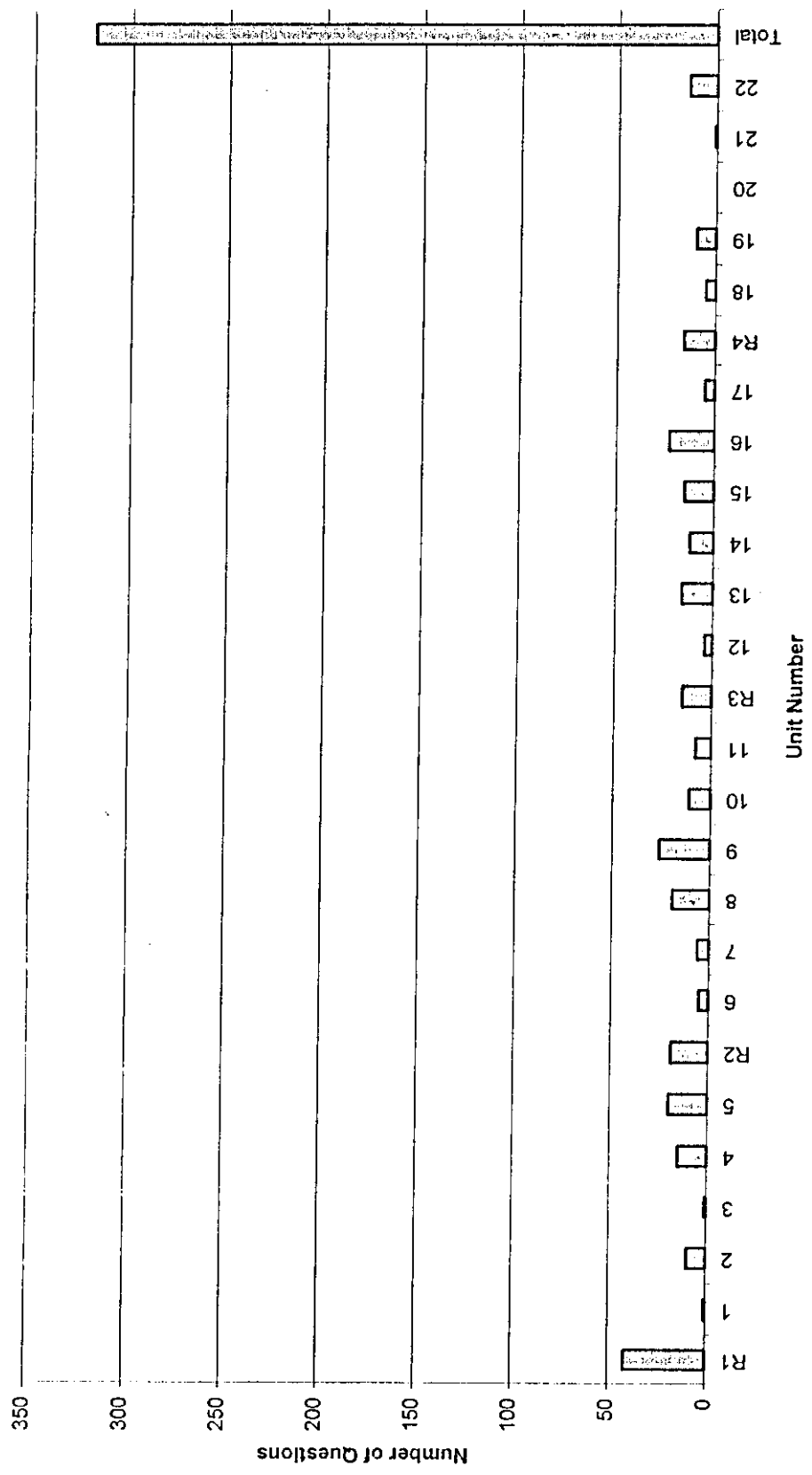


Figure 13: Number of Questions per Analysis Taxonomy for the Workbook

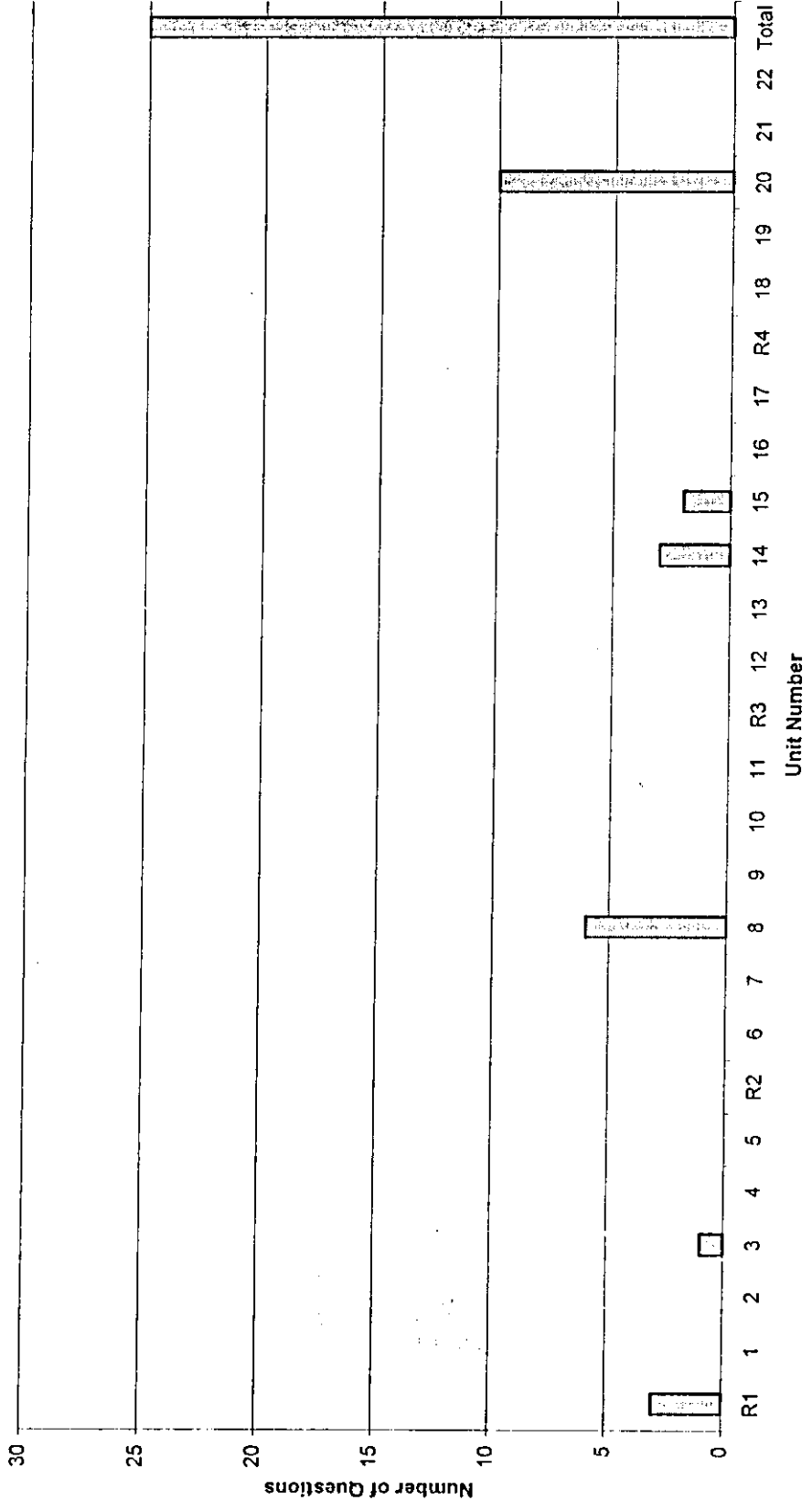


Figure 14: Number of Questions per Synthesis Taxonomy for the Workbook

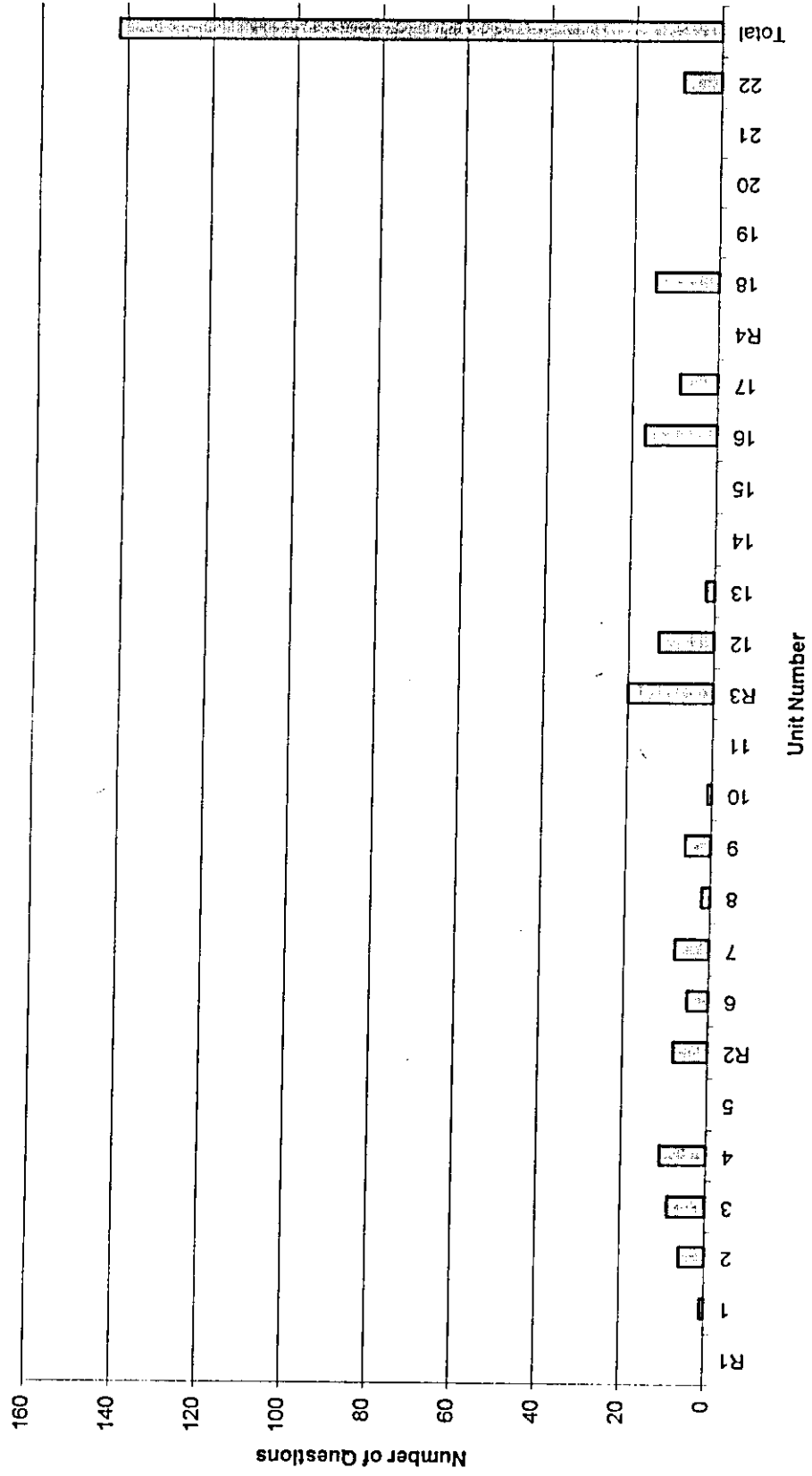


Figure 15: Number of Questions per Evaluation Taxonomy for the Workbook

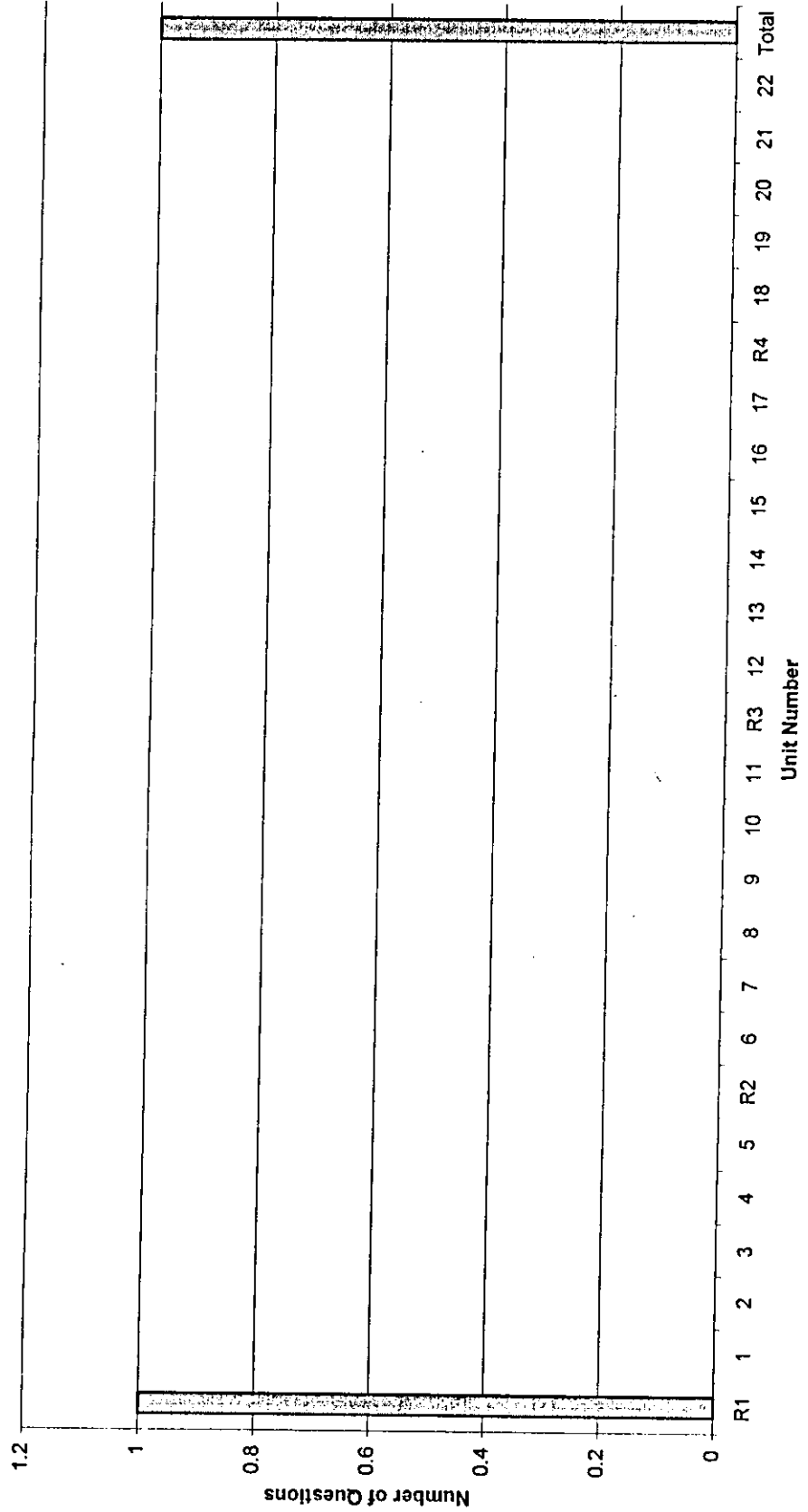


Figure 16: Number of Questions Per Each Taxonomy for Story 1

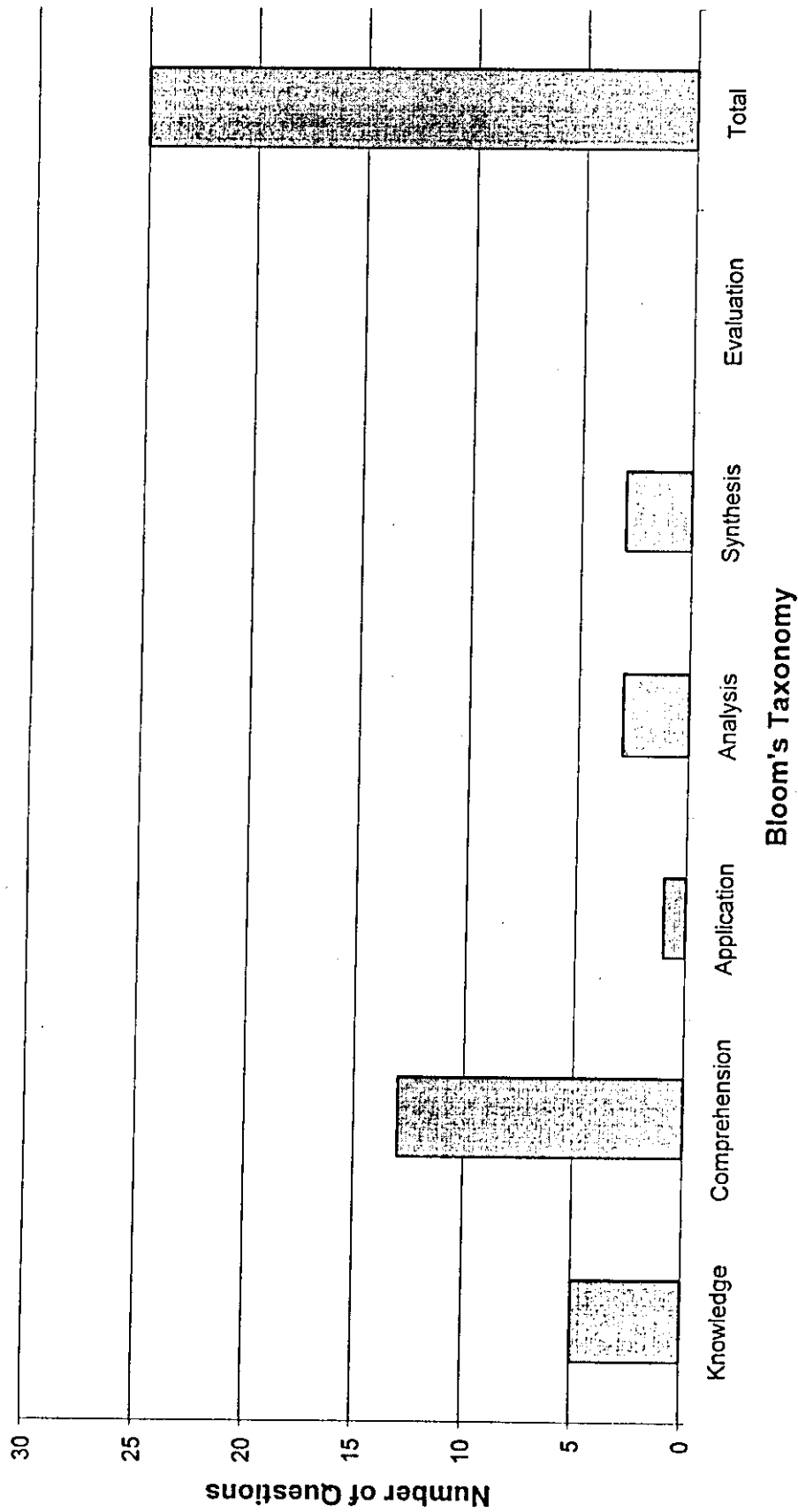


Figure 17: Number of Questions Per Each Taxonomy for Story 2

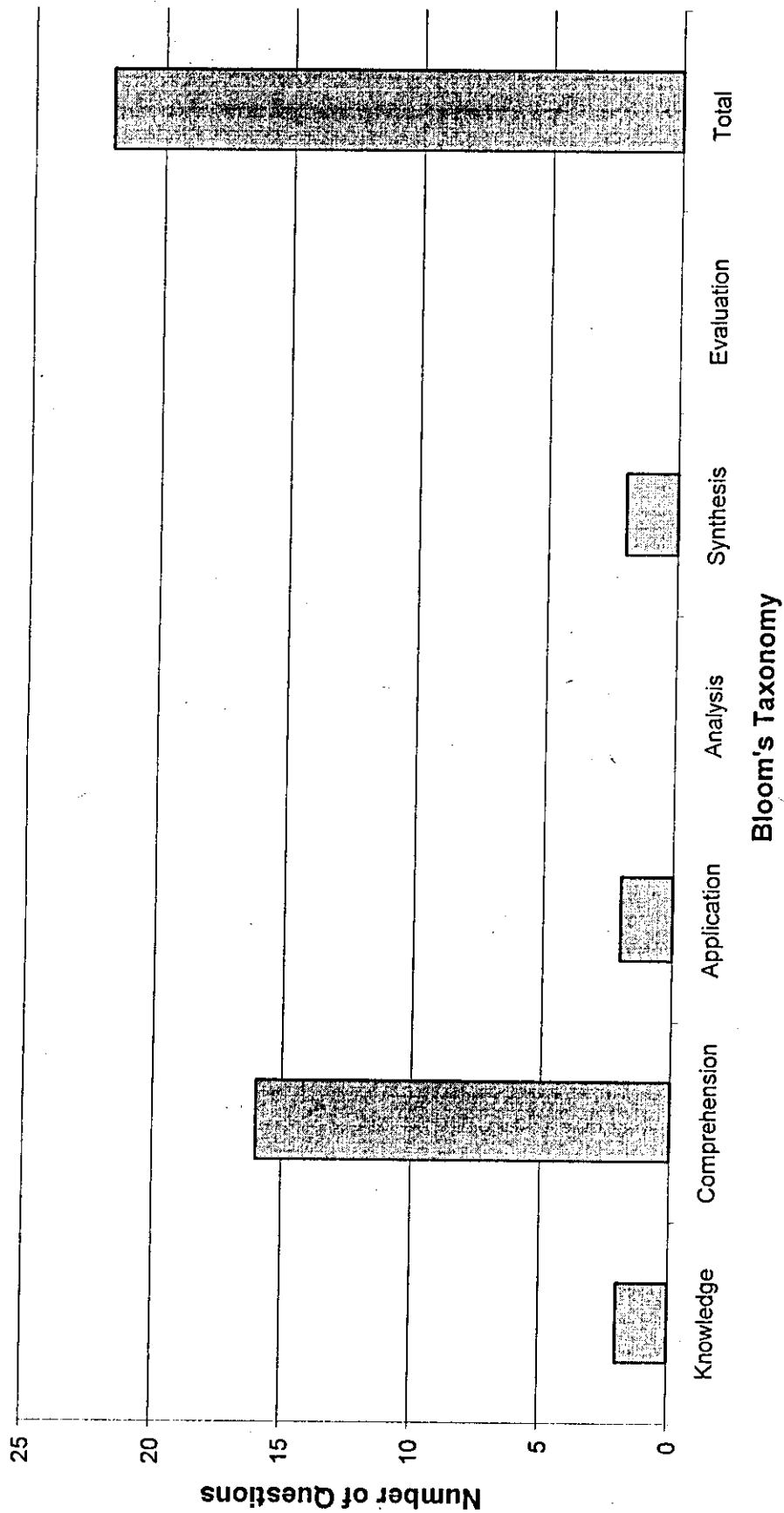


Figure 18: Number of Questions Per Each Taxonomy for Story 3

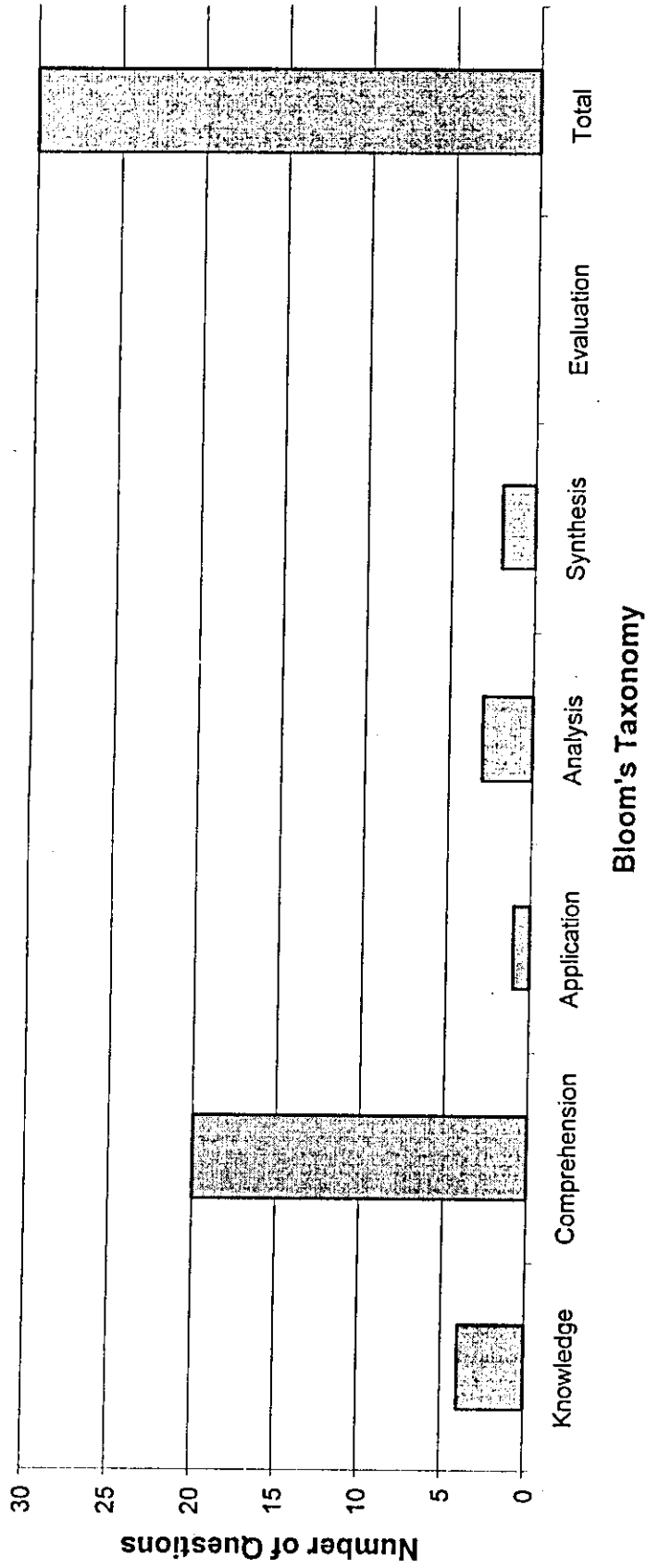


Figure 19: Percentages of Each Taxonomy for the Student Book

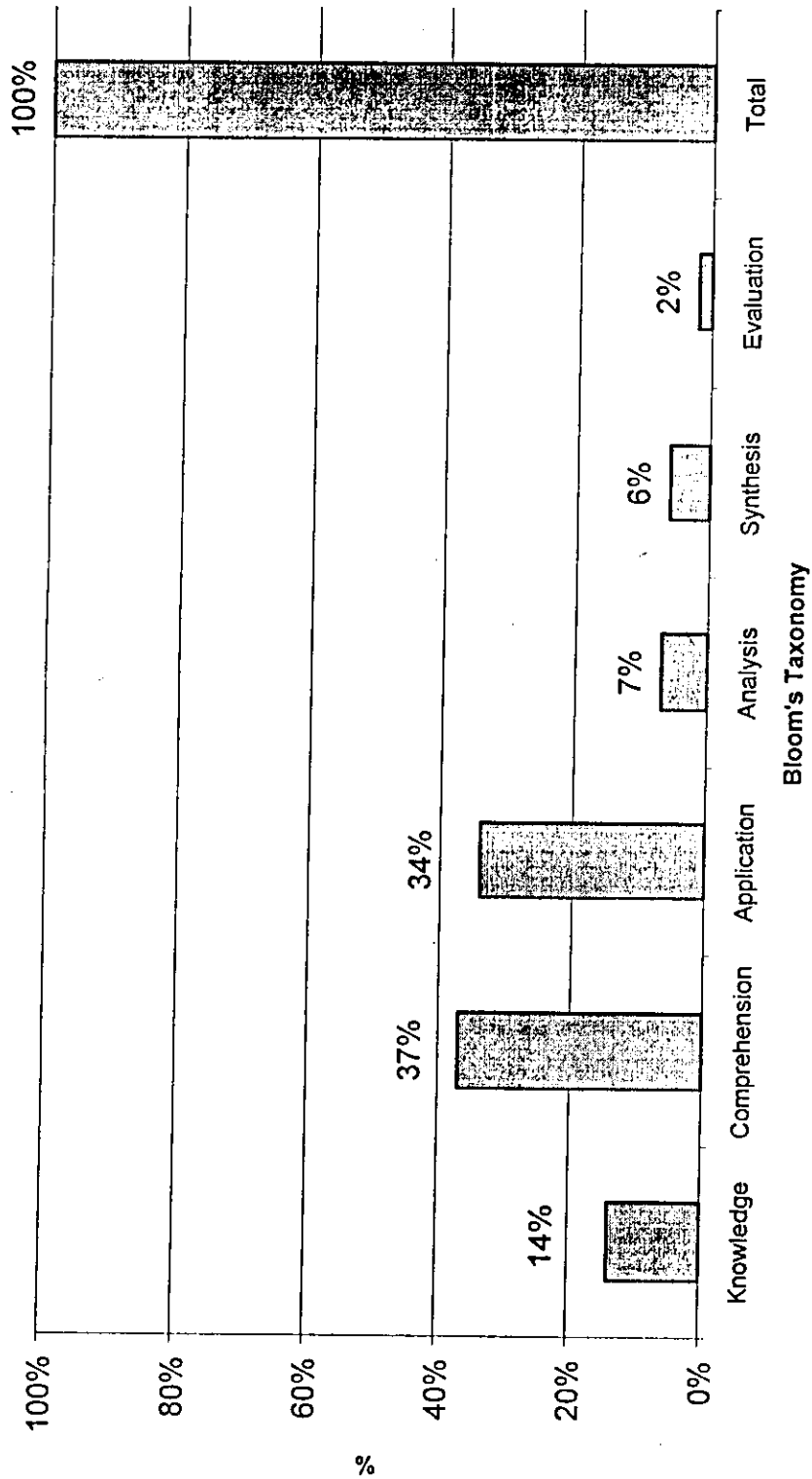


Figure 20: Percentages of Each Taxonomy for the Workbook

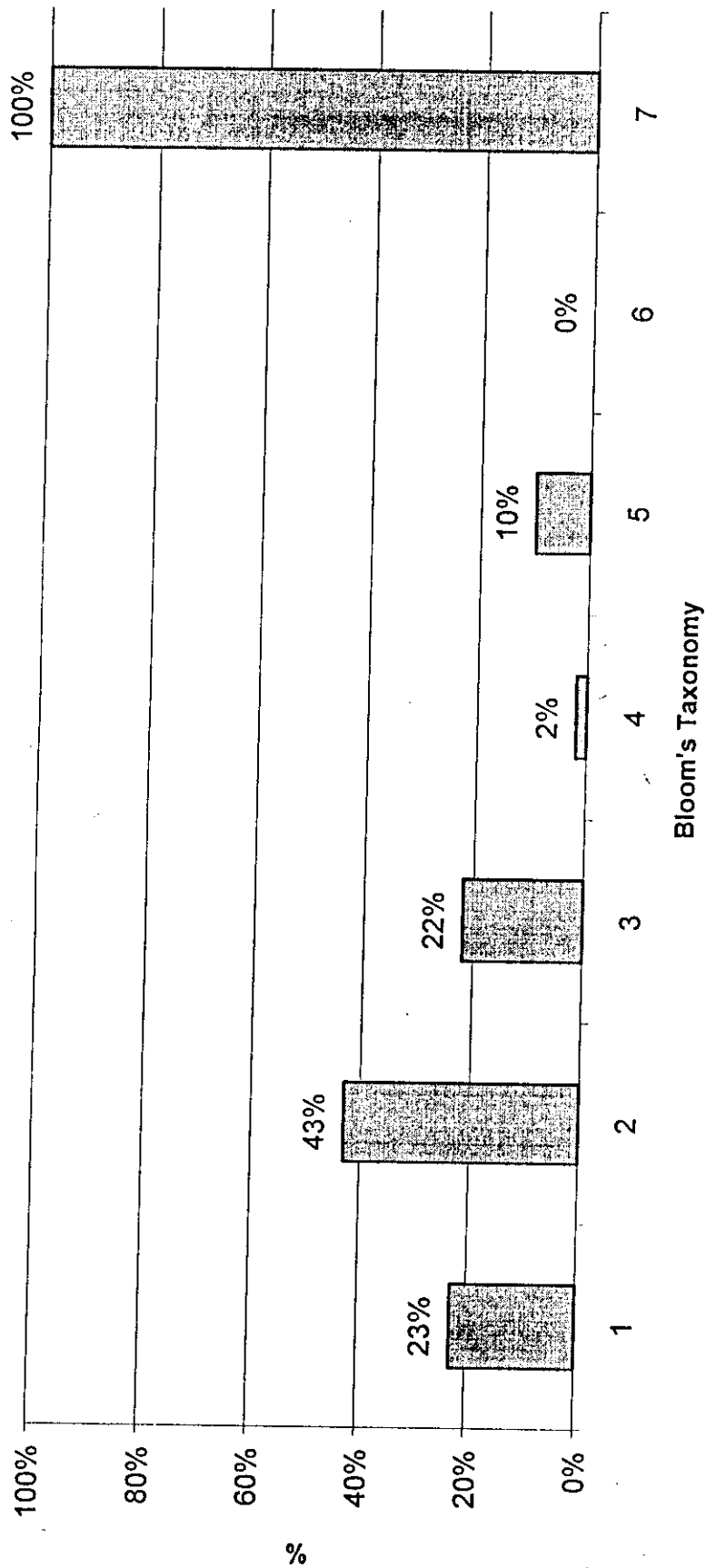


Figure 21: Percentages of each Taxonomy for the Three Stories

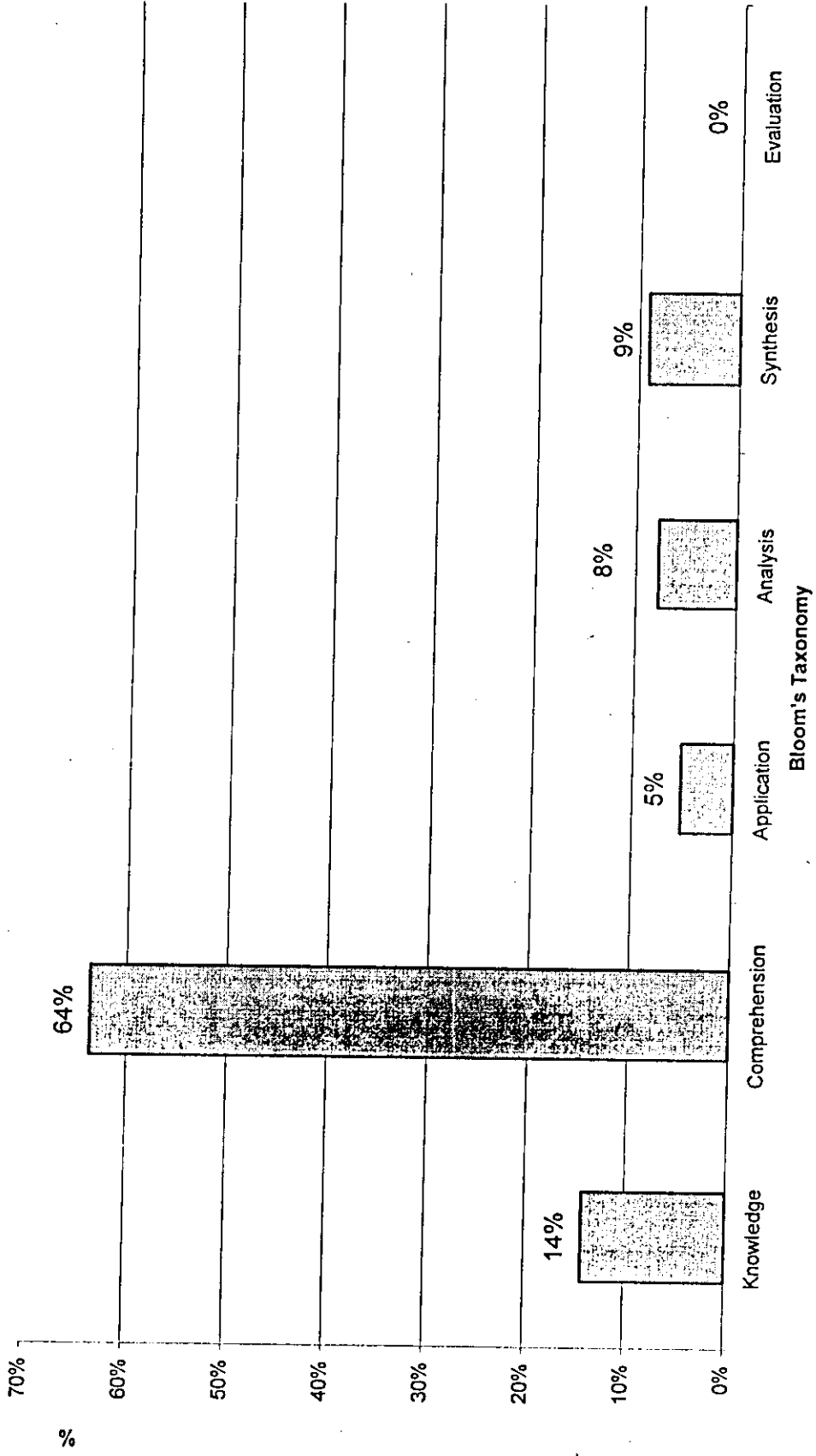


Figure 22: Percentages Per Each Taxonomy for the Three Texts

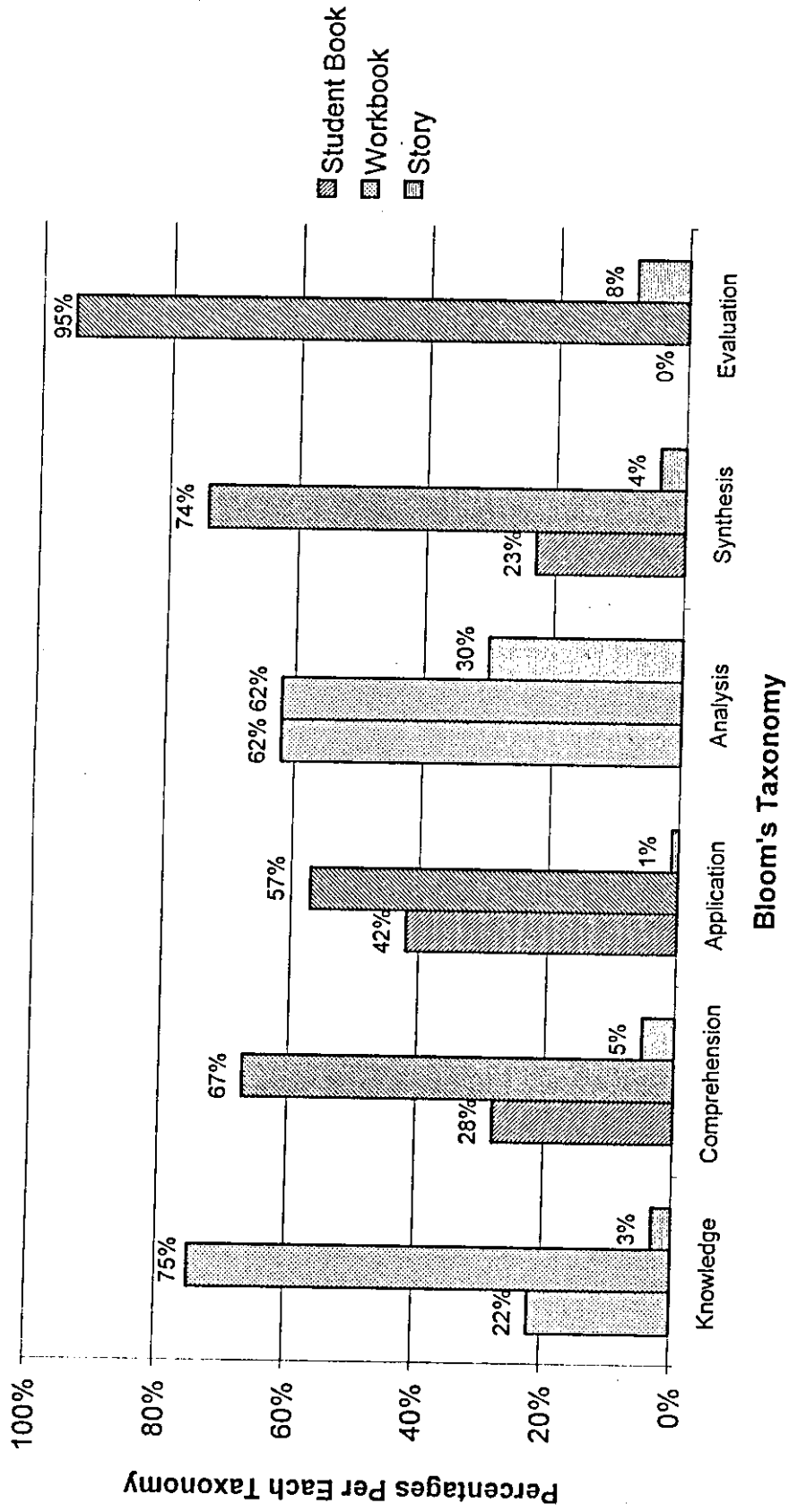
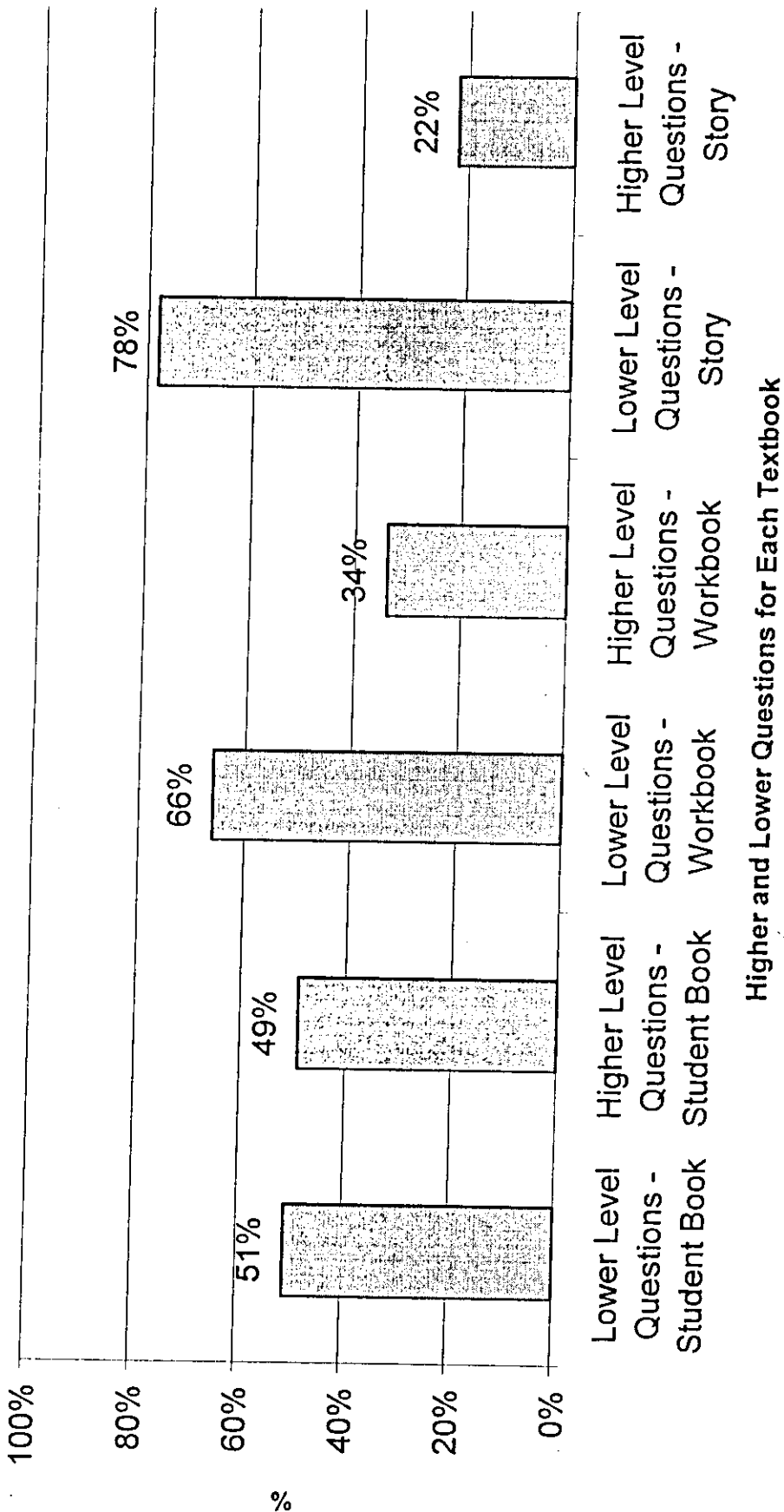


Figure 23: Percentages of Higher and Lower Question Levels Per Each Text



تحليل أسئلة كتب اللغة الإنجليزية للمصف الثامن في فلسطين وفق تصنيف بلوم للأهداف المعرفية

إعداد : فاطمة العالول

إشراف : دكتور فواز عقل و أ.دكتور جودت سعادة

ملخص الأطروحة

تلعب الأسئلة المدرجة في الكتب المدرسية دوراً هاماً في تجسيد الأهداف التربوية والتعليمية . فعن طريقها يتم اختبار مدى استيعاب الطالب للمادة الدراسية ، وبها تقاس قدرته على سرد المعلومات المختلفة والتحليل ، إضافة إلى تجميع وترتيب النصوص المختلفة من أماكن متعددة وتطبيقها بما يخدم الغايات المطلوبة من الأسئلة .

كانت أسئلة الكتب المنهجية ولا زالت المصدر الرئيسي الذي يتعرف من خلاله الطالب على الأفكار الأساسية في المادة التعليمية ، لذا فإن الأسئلة تسلط الضوء على الأسلوب الصحيح للدراسة ولا يمكن إخفاء الدور الرئيسي للأسئلة في رفع سوية الطالب والرقى بمستوى تفكيره ، وحفزه على التركيز في النص واستخلاص المعلومات منه ، وبناء على ما تقدم تعتبر الأسئلة إحدى المكونات الأساسية في المناهج والكتب الدراسية .

ولا تقتصر الحاجة إلى الأسئلة على الطالب فحسب ، بل يحتاجها المدرس فالأسئلة تعينه في تقييم طلابه من ناحية وتقييم أسلوبه في التدريس من ناحية أخرى .

يمكن تقسيم الأسئلة إلى قسمين رئيسيين ، قسم يتطلب إجابة مباشرة من النص وتسمى أسئلة التذكر ، والقسم الآخر يشمل الأسئلة التي يعتمد في الإجابة عليها على الاستنتاج والتطبيق والتصنيف والمقارنة وما شابه ، وتسمى أسئلة تفكير .

هذا الدور الرئيسي الذي تلعبه الأسئلة في العملية التعليمية يجعل من الضروري تقييم المناهج والكتب المدرسية اعتماداً على ما تحويه من الأسئلة المختلفة المتعددة الأهداف .

لعل إحدى أهم الطرق المتبعة في تقييم الأسئلة استخدام تصنيف بلوم للأهداف المعرفية ، ويتم تصنيف الأسئلة حسب بلوم إلى ستة مستويات تشمل : التذكر ، المعرفة ، التطبيق ، التحليل ، التركيب ، وأخيراً التقويم .

تعتبر أسئلة التذكر والمعرفة من الأسئلة ذات المستوى المنخفض ، بينما الأربعة الأخرى تصنف مع الأسئلة ذات المستوى المرتفع من الحفز على التفكير ، ثم اعتماد منهاج اللغة الإنجليزية للصف الثامن في هذه الدراسة وذلك لأهمية اللغة التي تجعله ثابتاً من جهة ولقدرة هذا المنهاج بالتحليل والدراسة في عالمنا العربي من جهة أخرى ، وهذا يظهر جلياً في باب الدراسة العامة .

6. بالنسبة لأسئلة المستوى المنخفض (المعرفة والفهم) كانت نسبتها في

الكتب الثلاثة القراءة ، التدريب ، والقصة كما يلي وعلى التوالي : 51% ، 66%

، 78% .

أما أسئلة المستوى المرتفع فكانت على التوالي كما يلي : 49% ، 34% ، 22% .

وقد جاءت نتائج هذه الدراسة متوافقة مع نتائج معظم الدراسات السابقة التي قيمت المناهج وأسئلتها حسب تصنيف بلوم ، حيث أكدت نتائج هذه الدراسة على أن هنالك تركيز واضح على أسئلة المعرفة والتطبيق مع تركيز كبير على أسئلة المستوى المنخفض ، فيما حازت أسئلة المستويات العليا على نسبة منخفضة نوعاً ما .

هذا يقودنا إلى التأكيد على أن هذا المنهاج ربما لا يختلف كثيراً عن ما سبق ، وأن أساليب التدريس لم تتغير بشكل جذري ، وبالتالي يجب أن يكون التأكيد في المستقبل على أن يأخذ مصممو المناهج بعين الاعتبار اشتمال المنهج على مختلف أنواع الأسئلة وأصنافها المتعددة بشكل متوازن .