

## Analyzing American Language Course Textbooks' Questions Implemented at Prince Faisal Technical College in Jordan according to Revised Bloom Taxonomy

By

**Dr. Izzeldeen A. Alrbehat**

Royal Jordanian Air Force Technical University College for Aviation Sciences. Jordan.

Email: [iz.rbeahat43@gmail.com](mailto:iz.rbeahat43@gmail.com)

### Abstract

This study aimed to analyze the questions in the American Language Course Textbooks' (ALC) for levels one and two at Prince Faisal Technical College in Jordan and to know the extent to which they covered the domains: cognitive, psychological, and emotional. In order to achieve this aim, the researcher used Bloom's classification of educational goals (cognitive domain, psychological domain, and emotional domain) to analyze the questions, and its validity and reliability indicators have been verified. The sample of the study consisted of the questions included in the (ALC) Textbooks for levels one and two at Prince Faisal Technical College. The findings of the study revealed that the vast majority of the questions in each level individually were questions related to the cognitive domain, at a very high rate, while the questions in the emotional and psychosocial domains were limited. The results also showed that the vast majority of questions focused on the first two levels of cognitive goals, according to Bloom's classification, namely, memorization and understanding.

**Keywords:** *American Language Course Textbooks', Analyzing, Bloom Taxonomy.*

### Introduction

Students in Jordan are familiar with English as one of the subjects due to its important use in nowadays era. Equally, like in any other foreign languages, textbook is worthy to be used in English teaching and learning as a primary source. It helps both the teachers and the students in accomplishing the goals of the lesson.

Surely, English language nowadays is widely used by people all over the world. Considering the political, economical, social and educational changes as by product of globalization, learning English unfolds as necessary for the individuals to communicate regardless of their different walks of life. Also, English currently ranks on top of the most dominant global language; it is required in a number of fields, occupations and professions such as medicine, computing, communications, science information, business, and technology .etc. The facts that over a billion people speak English to at least a basic level has urged educators, researchers and specialists to look for methods and strategies to facilitate English learning (Dzau, 1990).

The attention of the designers of education to the teachers especially English teachers of development of learning goals comes from their interest in the development of the student's mind and thinking in a comprehensive way, and preparing him to be a thinker human and creative analyst and to create a goal to serve himself and his society properly and raise them to the highest levels, as the development of learning objectives in a comprehensive and complementary way helps the teacher to choose the appropriate teaching methods and the following means of education, educational activities, mental stimulants, and evaluation tests, in a manner consistent with these goals and achieve it, and then help him in correct teaching

which will develop the student's thinking and mind at all levels, not only at the level of memory and memorization (Darwaza, 2008). It is known that the educational goal is what the student is expected to do after the educational process, and the behaviors that show the learning, which are in general indicative of what they apply from mental processes and what he thought of (Darwaza, 2001; Forehand, 2005).

In order for the goal-setting process to be properly and integrally integrated away from improvisation and speculation, the first educators put out a classification that summarizes the memory processes that the teacher should take into account in the process of designing the lessons, so as not to miss any of them during preparing the student for learning and education. These classifications reflect the thinking processes that the student needs. (Forehand, 2005).

Perhaps one of the first classifications developed in this area is the classification of (Guilford, 1959) and the classification of (Bloom, 1956), and the classification of (Merrill, 1983) and (Gagne et al, 1992).

Here we are not talking about all the educational classifications that have been invented in this field. Educational books are full of the information that are talking about, but in this study we will deal with the Bloom classification in particular, due to its widespread popularity and universality, and its use in almost all of the world's educational institutions. There is no teacher in the world that has not heard of Bloom's classification or did not use it when formulating educational goals. In short, Bloom's classification of educational goals speaks of three domains that the teacher must take into consideration when developing the learning objectives of the subject he is studying. These domains are: *Cognitive domain, Psychological domain and emotional domain*.

**1. Cognitive Domain** It is defined as the domain in which the student acquires mental knowledge related to information, theories, facts and other knowledge that require the realization of the mind, thinking and run memory. For example: to read, to analyze, to assume, to interpret, to compare, to design, and to discover, etc., of the goals that fall under the cognitive pattern.

**2. Psychological Domain** And it is recognized as the field in which the student acquires the skills of mobility and practical procedures and other actions that require the use of muscles and its compatibility with the nervous system sensory. For example: as the student writing, playing, running, planting, printing, experiment, painting, sewing, embellishing, painting, etc., are of the goals falling under the psychological domain.

**3. Emotional Domain** It is defined as the field in which students acquire ethics, principles, attitudes, spirituality, aesthetics, and other actions that require emotions, compassion, and spirituality. Example: to appreciate, to respect, to cooperate, to love, to believe, to rejoice, to taste, to feel, to value, to be angry for the truth ... etc of the goals that fall under the emotional domain. As the objective of this study is to identify the extent to which the teacher respects Bloom's educational objectives in the field of knowledge only, we will give a brief definition of these levels and some key words:

### ***The Levels of Knowledge Level at Bloom***

It is important to know that Bloom classified the cognitive domain into six mental levels in a cumulative hierarchical order, these levels or mental processes are classified from easy to hard, simple to complex, and so the harder level necessarily involves the simplest level, and the easier level becomes a requirement before the higher level of it, indicating that the area of mental processes carried out by human memory and memory is the largest area occupied by

the base pyramid, and then gradually diminish this area up to reach the top of the pyramid, which represents the highest mental abilities performed by the brain as in Bloom's view.

In other words, most of what the brain does is simple mental processes such as remembering, and the least they do is complex mental processes compounded as synthesis and evaluation. These processes are:

### **1. Knowledge**

It is defined as the ability to retrieve particles, faculties, processes, patterns, facts, symbols, names, dates, titles, terms, titles, examples, and all information that requires memorization, recall partial and total information. Example: To mention, to enumerate, to give an example, to know ... etc.

### **2. Comprehension**

It is defined as the ability to absorb, perceive and digest information and ideas, where it is the individual here is able to understand and recognize concepts, rules, principles, laws and general ideas and assimilation and translation into different versions. Example: To understand, to explain, to interpret, to redraft text, to convert from one version to another, to translate ... etc.

### **3. Application**

It is defined as the ability to use abstract previously learned ideas and to employ them in tangible situations new material seen by the learner for the first time. As if the learner uses the generalized idea, or rule or procedure in new educational situations other than in which they have been educated. Example: To apply, to hire, to use, classify examples into categories, to solve mathematical problems using the learned rule, to make measurements, to pray ... etc.

### **4. Analysis**

It is defined as the ability to segment the garage or position into its elements, and analyze all to parts which includes, and the ability to see the details and relationships that connect them. Example: to analyze Poem to the ideas that make up, to analyze the experience to the steps that include that disassembles a device ... etc.

### **5. Synthesis**

It is the opposite of analysis, known as the ability to assemble the parts in an integrated whole according to a particular principle and to see the pattern that governs the parts in one unit. Example: To design, to assume, to solve the problem, to infer, to discover, to realize the relationship, to invent.... etc

### **6. Evaluation**

It is defined as the ability to describe, evaluate, weigh, evaluate, and judge things, and to express an opinion thereon, through reference to certain standards and standards of truth and objectivity, and then decision-making. For example, to judge the democracy of the debate and to assess the ongoing dialogue gives his opinion on a particular case ... etc.

These are the six levels that Bloom spoke about, which the teacher called for to take into consideration when he was in the position for the learning goals; which prepares the student to be able to learn, and think, and analytic, Inventor, and Creative (Bloom, 1956).

### *Statement of the Problem*

Analyzing textbooks is not new in all topics; it helps teachers set appropriate goals for their lessons in order to meet their educational needs. Analyzing English textbooks in Jordan still lacks a professional analysis. So, the researcher here tried to analyze questions in the (ALC) textbooks for levels one and two at Prince Faisal Technical College, in order to reach reasonable results and to make some suggestions for curriculum designers.

### *Purpose of the Study*

The purpose of the current study is to analyze the questions in the (ALC) Textbooks for levels one and two at Prince Faisal Technical College in Jordan and to know the extent to which they covered the domains: cognitive, psychological, and emotional.

### *Questions of the Study*

This study tried to answer the following questions:

1. To what extent do the questions contained in the American Language Course Textbooks for levels one and two cover the domains of cognitive, emotional, and psychological goals?
2. To what extent are the questions in the American Language Course Textbooks for levels one and two distributed on cognitive levels?

### *Significance of the Study*

Students will not develop the ability to reason, synthesize, solve problems, or higher mental processes necessary to become fully productive individuals without the higher thinking skills that are vital in all aspects of life. Thus, analysis of the textbook and the different types of questions it contains will be valuable to decision-makers, curriculum designers, EFL supervisors, and teachers as well. The importance of this study stems from the fact that it is analyzing two levels at the same time according to Bloom's classification of educational goals.

### *Limitations of the Study*

This study is limited to the questions in the (ALC) textbooks for levels one and two at Prince Faisal Technical College in Jordan. It is also limited to the method of analysis that was used by the researcher (content analysis). Besides, the researcher analyzed the textbooks of (ALC) in the second semester of 2021–2022.

### *Operational Definitions of Terms*

**Bloom Taxonomy:** Salem (2001) states that Bloom's cognitive levels are the levels that rank from simple mental processes (memorization) to advanced mental processes (evaluation), that is, behaviors moving from the simplest types is to identify the most complex behaviors is the evaluation.

**Analysis:** The analysis "refers to the ability of the learner to analyze the teaching material into its partial components, which helps to understand its structural structure, including analysis of relations between parts and elements."

**American language course:** the course which is employed by Prince Faisal Technical College. It has many levels. In the case of the present study, courses level 1 and level 2 will be investigated.

**Prince Faisal Technical College:** It is a college located in Amman whose aim is to graduate military personnel who are experts in aircrafts, engineering, electricity, and other professions in many sectors in Air Force.

## Literature Review

Al-Jaafra (2009) conducted a study in which the questions in the Arabic language books for the fifth, sixth and seventh grades in Jordan were analyzed using the Bloom classification of cognitive objectives. These questions were (1419), the researcher reached the result that the large percentage of questions came in the field of knowledge, and that the highest percentage was related to the measurement of minimum levels of thinking, which focuses on conservation and memory and not the higher levels that focus on application, synthesis, and evaluation.

Wang & Farmer(2008) conducted a study which aimed to check whether teachers of continuing education programs at Chinese universities were studying in a way that developed lower levels of thinking, or higher, by reference to Bloom's knowledge objectives, were they designed a questionnaire about the teachers' opinions, and attitudes toward the teaching method, and distributed it to a random sample of the continuing education program teachers in two randomly selected universities from the universities of Beijing and Shanghai. The study sample comprised of (389) male and female teachers, only (359) of them respond. The most important results were that the teachers in these programs are still teaching in a way that develops the minimum levels of thinking such as remembering, understanding and applying more than the development of the higher levels such as analysis, synthesis and evaluation, and accordingly proposed organizing seminars to train teachers on how to develop critical thinking among their students and higher levels by allowing them to become more involved in the learning process, and then learning in an open and more open manner.

In another study, Abdeen (2007) conducted a study which aimed to analyze the behavioral goals contained in the daily study plans developed by teachers at the "Al Qasimi Academy" for the preparation of teachers in the city of "Baqa Al Gharbiya" in Palestine using the classification of "Bloom", for goal levels, where he chose for this purpose a random sample of the study plans prepared by these teachers amounted to (147) study plans, developed by (49) teachers teaching Arabic, Religion, English, mathematics, computer, early childhood, for the academic year 2005. The results of the analysis found that (74%) of the goals were confined to the cognitive domain, and (18.4%) were restricted in the emotional domain, while only (7.6%) were restricted with the psychological domain, were (82.6%) of cognitive goals were related to the lowest levels of thinking, such as knowledge, compared with (17.4%) for higher levels of thinking such as analysis, synthesis, and evaluation.

In another study, Al-Agha (2004), in the same objective, he analyzed the questions of the geography book for the sixth grade in Palestine according to Bloom's classification of cognitive objectives. The result of the analysis is that all the (115) questions in the book were measuring the cognitive field, and the largest proportion (79.3%) were measuring the level of memorization.

Hammadin (2003) made a study which aimed to analyze the scientific questions contained in the geography books of secondary education in the (Sultanate of Oman) for the academic year 2001/2002 in the light of the cognitive educational goals, and emotional skills, and in its different levels, and to know the reality of these questions and their nature and types. After the analysis process, the researcher calculated the frequencies and percentages of the reality of these questions in the three books, the result of the analysis was that most of the evaluation questions in these geography books were mostly in the field of cognitive goals, at the expense of the emotional domain, and skills domain, and questions of cognitive objectives focused on measuring the minimum levels of thinking at the expense of higher levels. where the ratios for these questions are descending as follows: comprehension questions and received

a percentage of (36.24%), and questions of understanding received a percentage of (27.83%), application questions have received a percentage of (11.77%), the analysis questions have received a percentage of (11.93%), The evaluation questions have received a percentage of (6.42%), The lowest percentages were for the synthesis questions, with only (5.81%).

All these studies dealt with questions in textbooks, and most of these studies used Bloom's taxonomy as a guide for categorizing questions based on the levels of cognitive domain (knowledge, comprehension, application, analysis, synthesis, and evaluation). The results of these studies showed that most questions emphasized the knowledge level or the second level of comprehension despite the fact that the studies were conducted at different times

***Design and Methodology***

The aim of this study was to evaluate the questions in the (ALC) Textbooks for levels one and two at Prince Faisal Technical College based on Bloom's taxonomy and to determine the frequencies and percentages of the questions in Bloom's classification of educational goals.

***Study Approach***

To answer the study questions, the researcher followed the descriptive method, using the method of content analysis of the questions included in the (ALC) Textbooks for levels one and two at Prince Faisal Technical College in Jordan.

***Samples of the Study***

The sample of this study consisted of the questions included in the (ALC) Textbooks for levels one and two at Prince Faisal Technical College.

***Research Instrument***

The researcher used Bloom's classification of educational goals (cognitive domain, psychological domain, and emotional domain) to analyze the questions; it proved to be a valuable instrument for categorizing instructional questions.

***Validity of the Instrument***

The validity of Bloom's Taxonomy has been obtained through theoretical and empirical modes. Research studies in various curriculum areas have already supported the structure and content of this taxonomy. A panel of five judges, including two PhD university instructors and three PhD students at Yarmouk University will approve Bloom Taxonomy as a valuable instrument for analyzing instructional questions.

***Reliability of the Instrument***

The inter-rater reliability was established by visiting three English language instructors. The questions were transcribed and analyzed by the researcher and three other raters. The coefficient of reliability was calculated according to the following formula:

$\text{Co-efficient Reliability} = \frac{\text{No. of Agreement}}{\text{No. of Agreements- No. of Disagreements}} \times 100$
---

The reliability was 0, 88 which is suitable to conduct such a study.

## Research Design

This research is descriptive in nature. It used the analytical approach design (repetitions, percentages) to answer the study questions and extract the results. And for the extraction of duplicates, percentages were the next steps:

1. List all the questions that are included in the (ALC) textbooks, which are scheduled for students.
2. Read each carefully, accurately, and in order to identify its components and data and determine the required through it in order to determine the area to which it belongs, and to determine the level that measures the levels of the three target areas, and to determine the type of question.

### *Findings of the Study*

This part discussed and reported on the findings of the quantitative analyses of the collected data. The two questions of the study are discussed in order below:

**Results related to the first question:** "1.To what extent do the questions contained in the American Language Course Textbooks for levels one and two cover the domains of cognitive, emotional, and psychological goals?" (202) questions in level one, (188) questions in level two, and the following domains were distributed: (382 questions in the cognitive domain, at a rate of (98.3%), (2) questions in the emotional domain, at a rate of (1.0%), and (6) questions in the psychological domain, at a rate of (0.7%) of the total questions.

**Table 1:** Distribution of questions in (ALC) textbooks according to the domains (cognitive, emotional, and psychological)

level	Cognitive domain		Emotional domain		Psychological domain		Total	
	N	Ratio	N	Ratio	N	Ratio	Total	Ratio
Level one	195	96.8%	2	1.0%	5	2.2%	202	100%
Level two	187	99.8%	-	-	1	0.2%	188	100%
Total	382	98.3	2	1.0%	6	0.7%	390	100%

The questions were divided by domain in the two levels as follows: The number of questions in the level one (202) distributed to (195) questions in the cognitive domain, with the percentage of (96.8%), and (2) questions in the emotional domain, in the percentage of (1.0%) and (5) questions in the Psychological domain, in the percentage of (2.2%).

The number of questions in the (ALC) Textbooks' for levels two was (188) divided into (187) questions in the cognitive domain, in the percentage of (99.8%), and one question in the Psychological domain, in the percentage of (0.2%). There were no questions in the emotional domain.

The results revealed that the questions in the (ALC) textbooks were distributed among different domains of objectives in different proportions. The number of questions in the cognitive domain in the two levels was (382), with a percentage of (98.3%), and the number of questions in the emotional domain (2) questions, with a percentage of (1.0%), and the number of questions in the psychological domain (6) questions, with a percentage of (7%). The results also showed that the vast majority of the questions in each level individually were questions related to the cognitive domain, at a very high rate, while the questions in the emotional and psychosocial domains were limited, and the results showed that the level two textbooks contained no questions in the emotional domain.

The focus can be explained on the cognitive aspect of the (ALC) textbooks'-the subject of study-to the nature of the content in the sample study books, and its focus on concepts, information, and facts that require conservation and concentration. The reason for the lack of psychological questions may be due to the lack of full knowledge by the curriculum makers of the importance of these types of questions and their impact on students' achievement. This may be due to their fear that students will not be able to do it, and therefore not achieve it. Such an outcome requires consideration of the balance between the areas of objectives in the curricula of the English language. The imbalance between them may adversely affect the achievement of educational goals.

**Results related to the second question: 2:** "To what extent are the questions in the American Language Course Textbooks for levels one and two distributed on cognitive levels?"

Table 2 shows the results for the second question, represented by repetitions and percentages, according to the levels of educational objectives measured in the three objective domains: cognitive, emotional, and psychological.

**Table 2:** Distribution of Questions in the American Language Course Textbooks for levels one and two according to cognitive levels:

LEVEL	Knowledge		Comprehension		Application		Analysis		Synthesis		Evaluation		Total	
	N	Ratio	N	Ratio	N	Ratio	N	Ratio	N	Ratio	N	Ratio	N	Ratio
Level one	92	46.7%	51	25.89	33	17%	3	1.78	15	7.26	3	1.27	197	100%
Level two	97	52.4%	48	26.2	19	12.2%	1	0.02	15	8.4	4	2.4	185	100%
<b>Total</b>	189	49.8%	99	24.6%	52	12.1%	4	1.2%	30	9.2%	7	2.9%	382	100%

Table (2) shows that the number of cognitive domain questions in the two levels of (ALC ) Textbooks' reached (382) of the total number of questions, in all fields of objectives, and in the percentage of (98.3%) of the total number of all questions, these questions were distributed to the two books, as follows:

The number of cognitive questions in the level one textbook (197) questions, distributed to (92) questions, at the level of remembering, by percentage of (46.7%). (51) Questions in the understanding, by percentage of (25.89%). (33) Questions in the level of application, by percentage of (17%). (3) Questions at the analysis level, by percentage of (1.78%). (15) Questions at the level of synthesis, by percentage of (7.36%) and (3) questions at the level of evaluation, by percentage of (1.27%).

The number of cognitive questions in level two textbooks was (185) questions, distributed as follows: (97) questions at the level of remembering, by a percentage of (52.4%), (48) questions in the comprehension level by a percentage of (2.26%); and (19) questions in the application by a percentage of (10.3%); and one question at the level of analysis by a percentage of (0.3%); and (15) questions at the level of composition, by a percentage of 8.4%; and (4) questions at the level of evaluation, by a percentage of (2.4%).

The results of the study on the levels of knowledge of the objectives in the (ALC ) Textbooks' showed that the vast majority of these questions focused on the first two levels of cognitive goals, according to Bloom's classification, namely, memorization and understanding, while the availability of questions that measure the objectives of the application medium is low, and in general, most of the questions in the (ALC ) Textbooks in the field of knowledge focused on the levels of memory and understanding of the field mentioned, cognitive level.

These results highlight the lack of questions in the higher mental processes compared to the lower mental levels, despite the great importance of questions in higher mental processes. This means that the (ALC) Textbooks did not meet the expected criteria in terms of the inclusion of a sufficient number of questions, which represent the higher mental abilities, and did not focus on developing these abilities among the students.

## References

- Abdeen, M. (2007). Analysis of Behavioral Goals in the Plans of the Teacher Students' Courses at Al-Qasimi Academy for Teacher Training. *Journal of Al-Quds Open University for Research and Studies* (12) pp. 197-231.
- Agha, R. (2004). Analysis of the Questions of Geography Book for the sixth grade in Palestine according to Bloom's classifications, *Journal of the Islamic University (Series of Humanities Studies)* 12 (1) pp. 451-467.
- Bloom, B. (1956). *Taxonomies of Educational Objectives*, Handbook 1. Cognitive Domain, NY: McKay.
- Darwaza, (2008). Quality and Consistency in the Design of Education as a Tool to Evaluate Performance Teacher and Development. *Al Najah Journal of Research (Humanities)* 22 (2) 643-667.
- Darwaza, (2001). Procedures in the design and evaluation of curricula. (3), Center for Documentation, Manuscripts and Publications (29) *An-Najah National University, Nablus, Palestine*.
- Dzau, Y. (1990). How English is taught in Tertiary Educational Institution English in China HongKong, API Press Ltd Hong Kong China. Education, Osaka, Japan. Retrieve from [http://webcache.googleusercontent.com/search?q=cache:K110uHUOPgkJ:iafor.org/archives/offprints/acll2011-offprints/ACLL2011\\_0102.pdf+&cd=1&hl=tr&ct=clnk&gl=tr](http://webcache.googleusercontent.com/search?q=cache:K110uHUOPgkJ:iafor.org/archives/offprints/acll2011-offprints/ACLL2011_0102.pdf+&cd=1&hl=tr&ct=clnk&gl=tr)
- Forehand, M. (2005). *Bloom's Taxonomy: Original and Revised*, In M. Orey (Ed.). *Emerging Perspectives on Learning, Teaching and Technology*. Department of Educational and Instructional Technology, University of Georgia. AECT Publication.
- Gagne, R., Briggs, J. & Wagerm W. (1992) *Principles of Instructional Design*, (4th ed.). USA: Holt, Rinehart & Winston.
- Guilford, J. (1959). Three Faces of Intellect. *American Psychologist*. (14). 469-479.
- Hammadin, F. (2003). Analysis of the Evaluation Questions in Geography Books in the Secondary Education Level of the Sultanate of Oman in Light of Educational Goals, *Educational Journal*, Vol. 17, No. 68, pp. 55-99.
- Jaafra, Kh. (2009). An Analytical Study of the Questions of the Arabic Language Books for the Fifth, Sixth and Seventh Grades in Jordan. *Journal of Educational and Psychological Sciences of the College of the University of Bahrain* 10 (4) pp. 64-86
- Merrill, M. (1983). *The Component Display Theory*. In C. M. Reigeluth (Ed.), *Instructional design theories and models: An overview of their current status*. NJ: Lawrence Erlbaum Associates.
- Wang, V. & Farmer, L. (2008). Adult Teaching Methods in China and Bloom's Taxonomy", *International Journal for the Scholarship of Teaching and Learning*. 2(2). 1-17