
Analyzing Vision3 through Bloom's Revised Taxonomy

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Abstract

As materials development is an ongoing process that needs to be analyzed in a multidimensional manner, the present study focuses explicitly on the English Textbook Vision3 in Iranian senior high schools to investigate to what extent this English textbook involves the domains of learning objectives defined by Benjamin Bloom's Taxonomy (1985) each of which contains several subcategories investigated through the study in details. Considering gained tables on analyzing the information load and the significant factor of Vision3 (Student's and Workbook) within cognitive, affective, and psychomotor domains of Bloom's Revised Taxonomy using Shannon Entropy Method, it is concluded that regarding the cognitive domain, "Evaluation" is in the first, "Application" in the second, "Synthesis" in the third, "Knowledge" in the fourth, "Analysis" in the fifth, and "Comprehension" in the sixth place of significance. None of the six defined cognitive subcategories is neglected within the development of the textbook. However, statistical results show that among the affective domain's subcategories only "Responding" and "Receiving" are put into practice, while higher levels of affective domain include "Valuing", "Organizing", and "Characterization" are neglected throughout the both student's and the workbook. Furthermore, studying the psychomotor domain of the considered English textbook, it seems that "Guided Response" and "Mindset" are the only subcategories that are noticed through strategies. In general, tables reveal that the most frequently involved domain among Bloom's Revised Taxonomy belongs to the cognitive one and the other two domains (affective and psychomotor) play a little role through their higher subdivisions.

Keywords: Bloom's revised taxonomy; English textbooks; Iranian senior high schools

INTRODUCTION

Unlike public imagination, developing material is an ongoing process through which the learners' need is catered to. According to Tomlinson, educational material includes anything used to help language learners learn. In simpler terms, developing an appropriate material not only does cause to saves time, energy, and budget, but it brings valuable outcomes for all stakeholders, the most prominent of whom are the students. Therefore, regarding educational materials, specifically textbooks as

a vital component of curricula, many experts have considered this issue one of the most studied area of research. For instance, Pourzahir (2015) states that educational activities and learning experiences should be arranged so coherently that they can support each other appropriately. He believes that arranging the contents of the learning process plays a crucial role in improving the general curriculum of any educational program.

According to Brian Tomlinson (1998), textbooks are materials used by teachers to facilitate the learning process for the pupils.

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These materials expose learners to the new language in various ways to increase their knowledge and experience. On the other hand, many variables such as learning theories, teaching theories, learners' characteristics, teachers' proficiency, and experience can influence the profitability of the textbooks. Therefore, not only developing textbooks cannot be underestimated in any curricula, but it should also be based on a sound and systematic pattern to assist many learners in learning a foreign language as efficiently as possible.

Furthermore, the advent of various methods during the recent century has caused a wide variety of textbooks in the market, each of which follows and emphasizes a specific part of the learning and teaching process. Following the previous studies, the most influential factors for developing or evaluating a textbook include authentic contents, communication opportunities, conscious and subconscious learning, left and right-brain activities, corpus material, contextual realization, pedagogical realization, physical appearance, and sequence of activities.

The previous studies also reveal that providing suitable materials can improve the learners' cognitive development to be critical thinkers. Richards (2001) believes that teaching materials are the most vital components of any language program since they serve as the basis for much of the language input that learners receive, and most of the practices in English classrooms occur on them and even in the case of novice teachers, teaching materials play the leading role through the whole course. Cunningsworth (1995) summarized the role of English teaching materials, particularly textbooks as:

- a source for presentation materials (spoken and written)
- a source of activities for learner practice and communicative interaction
- a reference source for learners on grammar, vocabulary, pronunciation, and so on
- a source of stimulation and ideas for classroom activities
- a syllabus (where they reflect learning objectives that have already been determined) support for less experienced teachers who have yet to gain confidence

Richards (2001) also put forward several merits of applying English textbooks as follows:

- Describing the structure and syllabus of the program
- Conferring standardized instruction
- Assuring the quality of the learning process
- Offering a variety of learning resources
- Facilitating second language learning and second language teaching to be efficient
- Conferring effective language model and input
- Serving as a medium of initial teacher training and providing second language learning and teaching with a visually appealing model

In practical terms, regarding the role of materials in a language program, developing an English textbook can be based on authentic contents or created ones. In Richard's words, authentic materials refer to text, photos, graphs, videos, and other teaching resources that were not specifically prepared for pedagogical purposes while created materials refer to textbooks and other specifically developed instructional resources.

All in all, having reviewed the existing textbook evaluation research, it seems the most remarkable aspect of the recent research is focused on the cognitive domain of the Bloom's Taxonomy and despite the significance of the other two aspects, affective and psychomotor are not adequately paid attention within developing process of the textbooks. On the other hand, on account of the importance of presenting English textbooks in senior high schools of Iran, confined to prescribed textbooks in a focused program, an ongoing multidimensional evaluation of the whole domain seems crucial to boost the educational efficiency of education in the current curriculum.

Purpose of the Study

In some countries like Iran that the whole educational curriculum is prescribed and the main general policies of the educational system of schools are determined and controlled by the higher organizations including the Ministry of Education, contents of the textbook, as the most crucial components of the curriculum,

play an essential role in learning and teaching process of students and teachers respectively. In fact, according to Educational Product Information Exchange (1,976), approximately two-thirds of the class time is dedicated to the written materials, mainly textbooks. Therefore, evaluating the current textbook is essential to scientifically investigate and study the current contents of the textbooks to update and improve the contents, eliminate the existent problems according to novel scientific-educational theories, and decrease their demotivating effect as much as possible. In this regard, the present study implements a comprehensive scale textbook evaluation of Iranian Senior High School textbooks to see to what extent the current English textbook (Vision3) meets different domains of learning defined by Bloom's taxonomy. To do so, this study explicitly evaluates the current English textbook (Vision3) in Iranian Senior High Schools to investigate to what extent these textbooks involve the domains of learning defined by Bloom, including the cognitive domain (which deals with knowledge and understanding the concepts), affective domain (that deals with attitudes and feelings of the learners) and psychomotor domain (that deals with physical skills) each of which contains several subcategories investigated through this study in details.

REVIEW OF LITERATURE

Educational psychologists like Engelhart, Hill, Kratwohl and Masia have differently divided educational objectives, however, Bloom's Revised Taxonomy is the most famous one in which educational goals have been categorized into three general domains including cognitive domain, affective domain, and psychomotor domain each of which includes several subdivisions:

Cognitive Domain (Bloom's Taxonomy)

The cognitive domain emphasizes on kind of knowledge that learning is necessary. Through this domain, the educational objectives have been organized from simple and tangible one to complicated and abstract ones: Knowledge/ Comprehension/Application/Analysis/Synthesis/Evaluation.

Affective Domain (Bloom's Taxonomy)

This domain of learning concentrates on perspectives, emotions, interests, and values. Although this domain should have been considered a vital component of the learning process, various studies reveal that it is not taken as severe for designing the educational objectives as it should be. Likewise, the affective domain has been divided into five categories from simple to complicated ones: Attending (receiving)/ Responding/ Valuing/ Organizing of values/ Characterization by values

Psychomotor Domain (Bloom's Taxonomy)

This domain of educational objectives mainly involves practical skills which require conformity among different parts of the body and mental functions. Exactly like two previous domains, this one also includes five levels which start from simple observation and imitation and finally concludes with normality which is the highest level of this domain: Perception/ Mind Set/ Guided Response/ Mechanism/ Complex Overt Response/ Adaptation/ Origination. In this way, Bloom's Revised Taxonomy is considered one of the most practical models through which numerous textbooks have been evaluated to analyze their cognitive, affective, and psychomotor domains. For instance, Y. Gordani (2010) explored different types of learning objectives in Iranian Junior High School English textbooks from the viewpoint of Bloom's Taxonomy. This study detected the trends in learners' cognitive domain concentrated on the three first levels of Bloom's Taxonomy as lower levels of cognitive skills.

S. Razmjoo and E. Kazemporfard (2012) evaluated the Interchange series which is still one of the fundamental course books in EFL curriculum settings. The result of the study which had been done based on Bloom's Taxonomy displayed that due to a lack of metacognitive knowledge, the intended textbook cannot make learners critical thinkers. M. Mizbani and A. Chalak (2017) also analyzed the reading and writing activities of Iranian textbook prospect 3 based on Bloom's Taxonomy. The analysis of the achieved data indicates that the reading and writing activities of the textbook are often cate-

gorized in the lower level of learning objectives

in the cognitive domain.

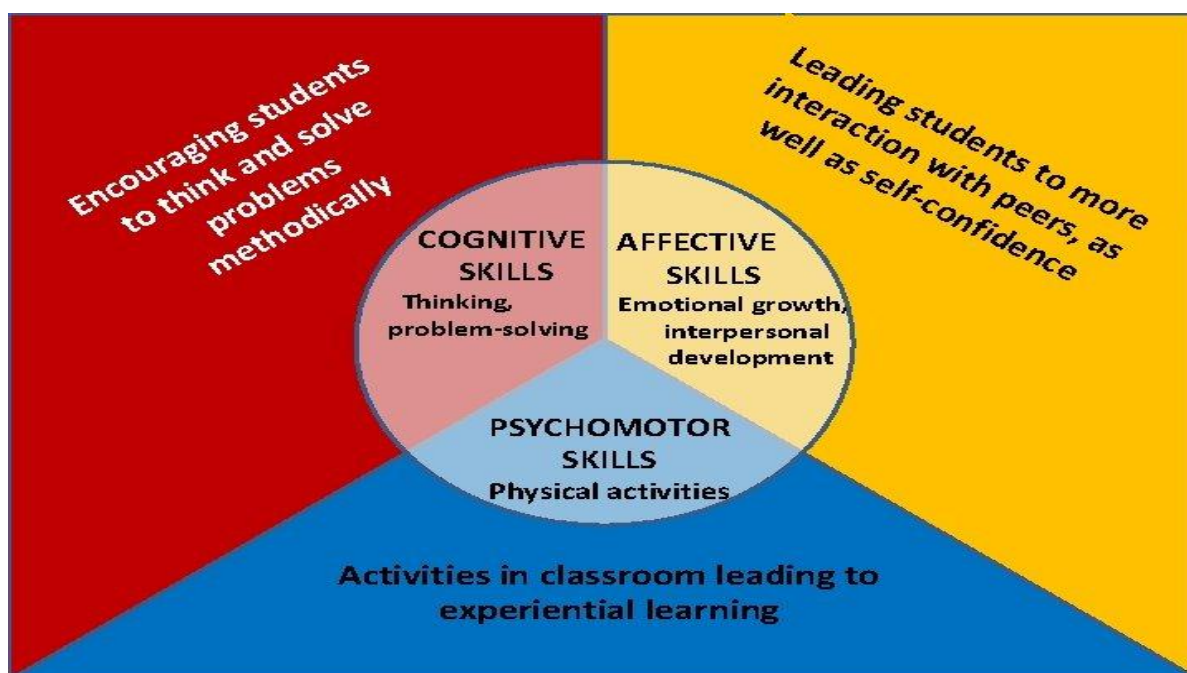


Figure 1
Bloom's Revised Taxonomy

Totally, in some countries like Iran, the whole educational textbooks are prescribed and the main general policies of the educational system of schools are determined and prescribed by the higher organizations including The ministry of Education. In this context, the contents of the textbooks, as the most crucial components of the curriculum, play an undoubtedly vital role in the learning and teaching process of students and teachers. In fact, according to Educational Product Information Exchange, (1976) approx. two-thirds of, or thirds classroom time is dedicated to written materials, mainly textbooks. Therefore, evaluating the current textbook is considered essential for education experts to scientifically investigate and study the contents of the textbooks to update and improve them, eliminate the existing problems according to novel scientific-educational theories and decrease the demotivating effect of them as much as possible. To this aim, the present study is to precisely evaluate the current English textbook Vision3 in Iranian Senior High Schools to investigate to what extent this textbook involves the domains of learning defined by Benjamin Bloom's Taxonomy (1985) in-

cluding the cognitive domain (that deals with knowledge and understanding the concepts), affective domain (that deals with attitudes and feelings of the learners) and psychomotor domain (that deals with physical skills). Thus, as mentioned in the preceding section, each of the domains mentioned above contains several subcategories investigated through this study. Following the purpose of the study, the questions below are formulated:

Q1. To what extent does the English textbook Vision3 in Iranian senior high school meet the "cognitive domain" of Bloom's Revised Taxonomy?

Q2. To what extent does the English textbook Vision3 in Iranian senior high school meet the "affective domain" of Bloom's Revised Taxonomy?

Q3. To what extent does the English textbook Vision3 of Iranian senior high school meet the "Psychomotor domain" of Bloom's Revised Taxonomy?

METHOD

This study is descriptive and quantitative research. Since there is no assumption about the distribution of variables through the intended textbook, the

researcher is confined to working with non-parametric statistics appropriate to nominal levels of data. In other words, Shannon Entropy Method is utilized to investigate if the distribution of variables (the levels of Bloom's revised Taxonomy) differs from one another or not. Thus, considering the frequencies and percentages of the variables and the output of the Shannon Entropy Method reveals the distributions of the codes and the existing differences between the frequency of occurrence of higher and lower cognitive, affective and psychomotor domains based on Bloom's Revised Taxonomy.

Research Sample: Corpus

Regarding the research questions of the present study, the whole statistical population of this study contains the total contents of English Textbooks Vision3 including both student's book (97 pages) and workbook (60 pages) in Iranian Senior High School which is analyzed based on Bloom's Revised Taxonomy in all three cognitive, affective and psychomotor domains.

Instruments

Bloom's Revised Taxonomy

As the most famous educational evaluation, Bloom's Taxonomy (1985) is categorized into three general domains: cognitive domain, affective domain, and psychomotor domain which include several subdivisions based on which the considered contents are codified and then analyzed.

Shannon Entropy Software

Entropy is a central concept in social science. As the Decision Matrix is clearly defined, Entropy Method can be applied to evaluate the weight of variables according to which the more significant the statistical dispersion of the considered variable, the more statistical significance the variable entails. Within Information Theory, Entropy is regarded as an uncertainty criterion that is defined by the P^1 dispersion probability

Data Collection Procedure

Following the main purpose of the present research to analyze the current English

textbook of Iranian senior high schools, the entire contents of the textbook including the whole presented texts, exercises, prompts, pictures, and questions are codified based on Bloom's Revised Taxonomy into one of the following levels of learning objective domains specifically and then the frequency percentage of each level is calculated via Shannon Entropy Software and the results are shown in tables.

- The first question of the study which refers to the cognitive domain (To what extent does the English textbook Vision3 of Iranian senior high school meet the "cognitive domain" of Bloom's Revised Taxonomy?) is codified and studied based on Bloom's Revised Taxonomy as follows:
 - a. Sentences recognized as "Knowledge" level are codified as "KN".
 - b. Sentences recognized as "Comprehension" level are codified as "CO".
 - c. Sentences recognized as "Application" level are codified as "AP".
 - d. Sentences recognized as "Analysis" level are codified as "AN".
 - e. Sentences recognized as "Synthesis" level are codified
 - f. Sentences recognized as "Evaluation" level are codified as "EV".
- The second question of the study which refers to the affective domain (To what extent does the English textbook Vision3 of Iranian senior high school meet the "affective domain" of Bloom's Revised Taxonomy?) is codified and studied based on Bloom's Revised Taxonomy as follows:
 - a. Sentences recognized as "Attending" level are codified as "AT".
 - b. Sentences recognized as "Responding" level are codified as "RE".
 - c. Sentences recognized as "Valuing" level are codified as "VA".
 - d. Sentences recognized as "Organization of values" level are codified as "OV".
 - e. Sentences recognized as "Characterization" level are codified as "CH".
- The third question of the study which refers to the Psychomotor domain (To what extent does the English textbook Vision3 of Iranian senior high school meet the "Psychomotor

domain" of Bloom's Revised Taxonomy?) is codified and studied based on Bloom's Revised Taxonomy as follows:

- a. Sentences recognized as "Perception" level are codified as "PE".
- b. Sentences recognized as "Mind Set" level are codified as "MS".
- c. Sentences recognized as "Guided Response" level are codified as "GR".
- d. Sentences recognized as "Mechanism" level are codified as "ME".
- e. Sentences recognized as "Complex Overt Response" level are codified as "CR".
- f. Sentences recognized as "Adaptation" level are codified as "AD".
- g. Sentences recognized as "Origination" level are codified as "OR".

This research studies *Vision3* which includes three chapters. The required data for this study is based on content analysis technique which is one of the most popular descriptive methodologies for collecting data in quantitatively evaluating textbooks. Although content analysis can be conducted in different ways, the present study applies Bloom's Revised Taxonomy based on which the total behavioral objectives of each chap-

ter are extracted and recorded in the "ends-means" table through Shannon Entropy Software to weigh the sort of each category within the contents deeply. As mentioned earlier, the whole included texts, activities, and contents of each chapter are listed in separate columns followed by their type of domains and the kind of categories. It is worth mentioning that three educational experts carry ed out the codification process of the contents to increase the inter-rater reliability of the study.

RESULTS

Cognitive Domain: Cognitive domain emphasizes on kind of knowledge that learning it, is necessary. Educational objectives have been organized through this domain from tangible and straightforward to complicated and abstract ones. The whole included learning items of *Vision3*, student's book (SB) in addition to the workbook (WB), are codified based on Bloom's cognitive subcategories ranging from lower-order thinking to higher-order thinking (Knowledge/ Comprehension/ Application/ Analysis/ Synthesis/ Evaluation) as follows:

Table 1
Cognitive Domain Analysis - Vision3 Student's Book

Vision 3 Student's book	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation	Total
Lesson1	6	9	8	6	6	0	35
Lesson2	10	10	3	5	3	2	33
Lesson3	6	9	5	8	6	3	37
Total	22	28	16	19	15	5	105

Table 1 demonstrates the included subcategories of the cognitive domain within Vision 3 (student's book). As the table above shows, out of 105 total recorded learning items, 10 items involving "comprehension" and "Knowledge" subcategory relate to Lesson 2. Considering the gained frequencies (which is

essential for data analysis) the following Shannon Method is carried out and the gained results have been shown in the tables below.

Calculating Fiji:

Regarding table 1, Fiji is gained and values are demonstrated in table 2.

Table 2
Cognitive Domain Analysis - Vision3 Student's Book (Normalized Matrix)

Vision 3 Student's book	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
Lesson1	0.27272	0.321429	0.5	0.31578	0.4	0
Lesson2	0.45454	0.357143	0.1875	0.26315	0.2	0.4
Lesson3	0.27272	0.321429	0.3125	0.42105	0.4	0.6

Calculating the value of Entropy (E_j):

Considering table 2, the value of Entropy is calculated and then shown in table 3.

Calculating the weights (W_j):

The weight of each subcategory which is shown in table 3 is calculated.

Table 3
Information Load and Significance Factor of the English Textbook Vision3 (Student's Book) within Cognitive Domain of Bloom's Revised Taxonomy

Vision 3 Student's book	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
Entropy (E_j)	0.028693	0.001148	0.06798	0.01737	0.03977	0.07938
Weight (W_j)	0.122442	0.004898	0.290089	0.074122	0.169711	0.338737

Table 3 reveals that within the considered textbook of the study the maximum Significance Factor (W_j) belongs to "Evaluation", "Application",

"Synthesis" "Knowledge", "Analysis" and "Comprehension" in the first, second, third, fourth, fifth and the sixth place of significance respectively.

Table 4
Cognitive Domain Analysis - Vision3 Workbook

Vision 3 Workbook	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation	Total
Lesson1	1	2	6	3	4	0	16
Lesson2	3	5	4	3	3	1	18
Lesson3	3	3	3	0	6	0	15
Total	7	10	13	6	7	1	44

On the other hand, table 4 demonstrates the included subcategories of the cognitive domain within Vision 3 (Workbook). As the table above shows, out of 44 total recorded learning items 6 items involve "Application" and "Synthesis" subcategories related to Les-

son 1 and Lesson 3, while the "Evaluation" subcategory is neglected. Considering the gained frequencies (which is essential for data analysis) the following Shannon Method is carried out and the gained results have been shown in the following tables.

Table 5
Cognitive Domain Analysis - Vision3 Workbook (Normalized Matrix)

Vision 3 Workbook	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
Lesson1	0.142857	0.2	0.461538	0.5	0.307692	0
Lesson2	0.428571	0.5	0.307692	0.5	0.230769	1
Lesson3	0.428571	0.3	0.230769	0	0.461538	0

Considering table 5, the value of Entropy is calculated and then shown in table 6 in which

the weight of each subcategory which is shown in table 6 is calculated.

Table 6

Information Load and Significance Factor of the English Textbook Vision3 (Workbook) within the Cognitive Domain of Bloom's Revised Taxonomy

Vision 3 Workbook	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
Entropy(E_j)	0.085899	0.062769	0.037053	0	0.037053	0
Weight(W_j)	0.385588	0.281762	0.166325	0	0.166325	0

Table 6 reveals that within the considered textbook of the study the maximum Significance Factor (W_j) belongs to "Knowledge", "Comprehension", "Application" and "Synthesis" in the first, second, third, fourth, and the fifth place of significance respectively, whereas "Analysis" and "Evaluation" are neglected on account of lack of frequency (0).

Affective domain

This domain of learning concentrates on perspectives, emotions, interests, and values. The affective domain is divided into five categories from simple to complicated ones (Receiving/ Responding/ Valuing/ Organizing/ Characterizing) through which the whole learning items of Vision3 are codified and quantitatively analyzed as follows:

Table 7

Affective Domain Analysis - Vision3 Student's Book

Vision 3 Student's book	Receiving	Responding	Valuing	organizing	Characterization	Total
Lesson1	12	19	0	0	0	31
Lesson2	10	13	0	0	0	23
Lesson3	11	16	0	0	0	27
Total	33	48	0	0	0	81

As it is seen in the table above, out of 81 recorded items 19 as the maximum belong to the "Responding" subcategory included in Lesson 1 whereas "Valuing", "Organizing" and "Characterization" subcategories are neglected. Therefore, regarding the gained frequencies (which is essen-

tial for data analysis) the following Shannon Method is carried out and the gained results have been shown in the following tables.

Considering table 8, the value of Entropy is defined and then the weight of each subcategory is calculated shown in table 9.

Table 8

Affective Domain Analysis - Vision3 Student's Book (Normalized Matrix)

Vision 3 Student's book	Receiving	Responding	Valuing	organizing	Characterization
Lesson 1	0.36363	0.395833	0.333333	0.33333	0.333333
Lesson 2	0.30303	0.270833	0.333333	0.33333	0.333333
Lesson 3	0.33333	0.333333	0.333333	0.33333	0.333333

Table 9

Information Load and Significance Factor of the English Textbook Vision3 (Student's Book) within the Affective Domain of Bloom's Revised Taxonomy

Vision 3 Student's book	Receiving	Responding	Valuing	organizing	Characterization
Entropy(E_j)	0.002511	0.01073	0	0	0
Weight(W_j)	0.189635	0.810365	0	0	0

Table 9 reveals that within the considered textbook of the study the maximum Significance Factor (W_j) belongs to “Responding” and “Receiving” in the first and second

place of significance respectively, whereas “Valuing”, “Organizing” and “Characterization” are neglected on account of lack of frequency (0).

Table 10
Affective Domain Analysis - Vision3 Workbook

Vision3 Workbook	Receiving	Responding	Valuing	organizing	Characterization	Total
Lesson1	7	15	0	0	0	22
Lesson2	8	17	0	0	0	25
Lesson3	9	18	0	0	0	27
Total	24	50	0	0	0	74

On the other hand, table 10 demonstrates the included subcategories of the affective domain within Vision3 (Workbook). As the table shows, out of 74 total recorded learning items, 17 items the maximum pertain to the “Receiving” subcategory related to Lesson 2, while the other subcategories (Valuing, Organizing, and Characteriza-

tion) are neglected. Considering the gained frequencies (which is essential for data analysis) the following Shannon Method is carried out and the gained results have been shown in the following tables. Considering table 11, the value of Entropy and the weight of each subcategory are calculated and then shown in table 12.

Table 11
Affective Domain Analysis - Vision3 Workbook (Normalized Matrix)

Vision 3 Workbook	Receiving	Responding	Valuing	Organizing	Characterization
Lesson 1	0.291667	0.3	0.333333	0.333333	0.333333
Lesson 2	0.333333	0.34	0.333333	0.333333	0.333333
Lesson 3	0.375	0.36	0.333333	0.333333	0.333333

Table 12
Information Load and Significance Factor of the English Textbook Vision3 (Workbook) within the Affective Domain of Bloom's Revised Taxonom

Vision 3 Workbook	Receiving	Responding	Valuing	organizing	Characterization
Entropy(E_j)	0.004753	0.002577	0	0	0
Weight(W_j)	0.648474	0.351526	0	0	0

Table 12 reveals that within the considered textbook of the study the maximum Significance Factor (W_j) belongs to “Receiving”, “Responding” in the first and second place of significance respectively, whereas “Valuing”, “Organizing” and “Characterization” are neglected on account of lack of frequency (0)

Psychomotor domain

This domain of educational objectives mainly involves practical skills which require conformity among different parts of the body and mental functions. This domain also includes five levels (Set, Guided response, Mechanism,

Complex overt response, Adaptation, Origination) through which the whole learning items of Vision 3 are codified and analyzed as follows:

As it is seen in the table above, out of 40 recorded items 11 ones as the maximum belongs to the “Guided Response” subcategory included in Lesson 3 whereas “Adaptation”, “Complex Overt Response” and “Mechanism” subcategories are neglected. Therefore, regarding the gained frequencies (which is essential for data analysis) the following Shannon Method is carried out and the gained results have been shown in the following tables.

Table 13
Psychomotor Domain Analysis - Vision3 Student's Book (Frequency Counted)

Vision 3 Student's book	Mindset	Guided response	Mechanism	Complex overt response	Adaptation	Total
Lesson 1	5	7	0	0	0	12
Lesson 2	6	6	0	0	0	12
Lesson 3	5	11	0	0	0	16
Total	16	24	0	0	0	40

Considering table 14, the value of Entropy and the then weight of each subcategory are calculated and shown in table 15.

Table 15 reveals that within considered textbook of the study the maximum Significance Fac-

tor (W_j) belongs to "Guided Response", and "Mindset" in the first and second place of significance respectively, at the same time "Mechanism", "Complex Overt Response" and "Adaptation" are neglected on account of lack of frequency (0).

Table 14
Psychomotor Domain Analysis - Vision3 Student's Book (Normalized Matrix)

Vision 3 Student's book	Mindset	Guided response	Mechanism	Complex overt response	Adaptation
Lesson 1	0.3125	0.291667	0.333333	0.333333	0.333333
Lesson 2	0.375	0.25	0.333333	0.333333	0.333333
Lesson 3	0.3125	0.458333	0.333333	0.333333	0.333333

Table 15
Information Load and Significance Factor of the English Textbook Vision3 (Student's Book) within Psychomotor Domain of Bloom's Revised Taxonomy

Vision 3 Student's book	Mindset	Guided response	Mechanism	Complex overt response	Adaptation
Entropy (E_j)	0.003488	0.031941	0	0	0
Weight (W_j)	0.098453	0.901547	0	0	0

Table 16
Psychomotor Domain Analysis-Vision3 Workbook

Vision 3 Workbook	Mindset	Guided response	Mechanism	Complex overt response	Adaptation	Total
Lesson 1	1	4	0	0	0	5
Lesson 2	0	1	0	0	0	1
Lesson 3	0	3	0	0	0	3
Total	1	8	0	0	0	9

As the table above shows, out of 9 total recorded learning items 4 ones as the maximum pertain to "Guided Response" related to Lesson 1, while the other subcategories (Mechanism, Complex Overt Response, and Adaptation) are neglected. As the table above demonstrates the included subcategories of the Psychomotor domain within Vi-

sion3 (Workbook). Considering the gained frequencies (which is essential for data analysis) the following Shannon Method is carried out and the gained results have been shown in the following tables. Considering table 17, the value of Entropy and then the weight of each subcategory is calculated and shown in able 18.

Table 17
Psychomotor Domain Analysis - Vision3 Workbook (Normalized Matrix)

Vision 3 Workbook	Mindset	Guided response	Mechanism	Complex overt response	Adaptation
Lesson 1	1	0.5	0.333333	0.333333	1
Lesson 2	0	0.125	0.333333	0.333333	0
Lesson 3	0	0.375	0.333333	0.333333	0

Table 18
Information Load and Significance Factor of the English Textbook Vision3 (Workbook) within Psychomotor Domain of Bloom's Revised Taxonomy

Vision 3 Workbook	Mindset	Guided response	Mechanism	Complex overt response	Adaptation
Entropy(E_j)	0	0.11314	0	0	0
Weight(W_j)	0	1	0	0	0

(W_j) belongs to “Guided Response” in the first place of significance respectively and other subcategories “Mindset”, “Mechanism”, “Complex Overt response” and “Adaptation” are neglected on account of lack of frequency (0).

DISCUSSION

In Frankfort and Nechmias's words (2001), content analysis is a technique through which specific features of content can be systematically distinguished. Krippendorf (1980) also put forward a similar statement: Content analysis is a research technique to relate the data to its actual function validly and reliably. Thus, considering the above-presented tables on analyzing Information Load and Significance Factor of the English textbook Vision3 (Student's and Workbook) within cognitive, affective, and psychomotor domains of Bloom's Revised Taxonomy using the Shannon Entropy Method, it is concluded that regarding the cognitive domain, “Evaluation”, “Application”, “Synthesis” “Knowledge”, “Analysis” and “Comprehension” in the first, second, third, fourth, fifth and the sixth place of significance respectively and none of six defined cognitive subcategories are neglected within developing the textbook as the last English textbook of the senior high school program in Iranian Educational Curriculum. However, the same analysis on the related workbook as a separate side book for the pupils to accomplish, seemingly “Knowledge”, “Comprehension”, “Application” and “Synthesis” in the first, second, third, fourth and the fifth place of significance

respectively, whereas “Analysis” and “Evaluation” are neglected on account of lack of frequency. Attempting to study the extent of the affective domain within the considered textbook along with its workbook, statistical results show that among the affective domain's subcategories only “Responding” and “Receiving” are put into practice (in both student's and workbook) through applying various colors, challenging pictures, localized topics, underlined notes, audible exercises, oral responses, opinionnaire, and so on; while higher levels of affective domain including “Valuing”, “Organizing” and “Characterization” are neglected throughout the both student's and the workbook.

Furthermore, studying the psychomotor domain of the considered English textbook, it seems that “Guided Response”, and “Mindset” is the only subcategories that are noticed through strategies like providing examples to be followed by the pupils, listening to the recorded conversations, and attracting student's attention to pronunciation, stress, and intonations. In contrast, higher levels of this domain including “Mechanism”, “Complex Overt Response” and “Adaptation” are neglected in both student's book and workbook. In general, tables reveal that the most frequently involved domain among Bloom's Revised Taxonomy belongs to the cognitive one and the other two domains (affective and psychomotor) play a little role through their higher subdivisions.

In accord with the gained results, Vision 3 and its workbook as the last English textbook

in the senior high school program involve cognitive domain within almost all defined subcategories while only the lower levels of the other two domains, affective and psychomotor, are paid attention to developing the textbook. In other words, ignoring the affective strategies to prepare the student's emotional status and also the absence of adequate attention to the significance of psychomotor aspects of learning a foreign language, Vision3 lends itself only to cognitive approaches to foster the student's foreign language skills but what matters is that motivating the affection filter as well as leading the students toward independent performance through psychomotor approaches result in far more efficient foreign language learning. In terms of developing an English textbook for senior high school students in the 12 grade, educational developers are required to step beyond cognitive issues and take efficient actions in line with improving affective and psychomotor domains as the crucial criteria of learning a foreign language.

CONCLUSION

Analyzing the contents of a textbook is one of the most vital factors in evaluating an educational curriculum through which descriptive information can be provided to facilitate decision making to implement educational goals and plans in terms of meeting the needs of the individuals and the community (Bambergar, Rash, Mabry, 2006). That is, educational measures without evaluating and analyzing cannot be fruitful but an arrow in darkness. Thus, the primary purpose of the present study is to analyze the entire contents of English Textbook Vision3 as the last textbook of the senior high school program for Iranian students based on Bloom's Revised Taxonomy. However, plenty of studies are carried out on the considered English textbook from various points of view. For instance, Sudmadafshar & Sohrabi (2020) contend this textbook is a merely subject-based learning package that does not provide sufficient opportunity for producing linguistic skills and strategic learning. They also believe that Vision 3 does not involve the common interests of the learners in

the educational planning process via overemphasizing and localizing the content toward Iranian culture in an exaggerated manner. Norouzi & Babaiee (2001), a thorough evaluation of the included contents of the English Textbook Vision3, believe that the principle of variety and difficulty order is nearly observed through the exercises.

Overall, considering the importance of textbooks for teachers and learners, it should be kept in mind that individuals can analyze just 7^{+2} or 7^{-2} learning units in a specific time duration (cognitive load theory). They can process a limited number of information units at once (Sweller, 2011). Cognitive load involves the amount of data entered into working memory to be codified and then transferred into the extended memory. Thus, to exploit the most efficient information process of the learners' mental transaction by studying textbooks, textbook developers and curriculum designers are not to present a large amount of cognitive knowledge at once, but they have to make an effort to foster learner's mental capacity applying effective as well as psychomotor elements. In other words, paying inadequate attention to the cognitive process in developing textbooks might result in an inappropriate educational curriculum that is not efficiently suitable for the learners.

Therefore, having analyzed the last presented English textbook within the senior high school program (Vision3 along with its workbook), it ought to be mentioned that developing a textbook is a multidimensional task during which the entire influential factors are to be carefully considered so that the provided material play an active role in teaching and learning flow. In other words, developing an English textbook for non-native learners is not just to improve students' grammar, and vocabulary, but is to stay abreast of newly useful findings to evoke teacher as well as student motivation leading them toward deconstructive thinking. To do so, English textbook developers are required to be fully acquainted with textbook development criteria and frameworks to provide an appropriate foreign language textbook in which not only the cognitive but the affective and psychomotor factors are followed suitably. Fur-

thermore, inserting kinds of English language learning activities that foster learner's analyzing, synthesizing, and evaluating skills accompanying activities that include higher levels of affective and psychomotor domains can result in more balanced educational textbooks considering the whole aspects of the learner.

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