Analysis of 2015-2018 Life Studies Curricula Objectives Based on Marzano and Kendall Taxonomy

Gülsüm YILDIRIM[1]

Hakkari University

Abstract

The curriculum that changes according to the age conditions helps the individual adapt to society. One of the programs created in this context is the life studies teaching program. The objectives of the curriculums prepared gain importance in this context. This study aims to examine the 2015 and 2018 life studies curricula according to the Marzano and Kendall taxonomy; the document review method has been used. The objectives and explanations of the 2015 and 2018 life studies curricula, which were accepted by the Ministry of National Education, Board of Education and Discipline, have been examined as a document. For the analysis of the research data, the form objectives created by Marzano and Kendall have been used for evaluation. According to the results, 2015 and 2018 life studies teaching programs are generally included in the cognitive system according to Marzano and Kendall's taxonomy. The objectives in the self-system are insufficient. In addition, while there is an objective in the 2015 curriculum in the metacognitive system, there is no objective in the 2018 curriculum. In the context of knowledge, the 2015 and 2018 curricula' objectives include mental procedures and psychomotor procedures more than the information area. However, both 2015 and 2018 curriculum outcomes focus on mental procedures and psychomotor procedures of generally retrieval and comprehension levels.

Keywords: Life Studies Curriculum, Education Taxonomy, Marzano and Kendall Taxonomy.

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[1] Research Assistant Dr., Hakkari University, School of Education, Hakkari, Turkey, ORCID: 0000-0003-2987-47759
Correspondence: yildirimgulsum27@gmail.com

Introduction

The changes that have occurred globally in the last century also give rise to social changes. Raising individuals that can adapt to the changes become important individually, socially and globally. This situation highlights the importance of education. With its dynamic structure, education makes it possible to raise individuals that adapt to the changes. One of the curricula that were affected by changes and transformations is life studies curricula which is taught in the first three years of primary school.

Life studies curricula has been constituted withing the framework of collective teaching principle in accordance with child developmental characteristics in the republican era. (Ministry of national education [MoNE], 2005). The Life studies course has been constituted in 1926 within the framework of the opinions of the experts of ''Nature Study'', ''Agriculture and Public Health'', ''The Principle of Geography and History'', ''Musabahat-ı Ahlakiye and Malumat-ı Vataniye'' courses (Cicioğlu, 1985, p. 95) with the principle of collective teaching. Life studies, which were constituted in accordance with developmental features through the blending of different lessons, is expressed as a lesson that prepares the child for life, leads them to be a good person through learning by doing and equips them for the higher education institution (Karabağ, 2009, p. 4). It can also be regarded as a lesson that enables the child to have correct and sound knowledge about his or her environment and the world from an early age and to develop good habits and skills that are necessary for adapting to environment by making him or her analyze the societal and cultural environment in which he/she lives in (Binbaşıoğlu, 2003, p. 36). MoNE (2005); defines it as a lesson that were designed for the child to recognize both himself/ herself and the world and society in which he/she exists. As indicated by the definitions, life studies course is specified to be a lesson that prepares the children for the higher education institution and enables them to recognize themselves, their surroundings and nature by taking the child developmental features into account at first. Therefore, it could be said that life studies curricula become crucial for child.

The first and the most prominent element of life studies curriculum is ''Objective'' which is the case for curricula. ''Objectives'' which provide answers for the question "why do we teach?", have been used as ''goal'' and ''purpose'' within the framework of adopting the constructivist approach with the 2005 curricula (Ayvacı, Alev & Yıldız, 2014). Objectives explain the curriculum output and provides a vision for the future (Chatterjee & Corral, 2017). Ornstein and Hunkins (2016, p. 319) states that objectives involve a specific expression or certain behavioural outputs. In this context, in the objectives; students need to have the qualities that are expected to be acquired through planned or regulated experiences or students need to have qualities which are suitable to be explained as behavioral change or behaviour (Akpınar, 2010, p. 73). The objectives that will be created should have a value and not be simple. In other words; objectives may not be demonstrated or learnt in a good level unless they don't make sense for general society and individual (Ornstein & Hunkins,

2016, p. 319). Therefore, the objectives to be created are considered to be important. Within this context, different taxonomies have been generated in the field of education to make it easy for the curriculum designers and practitioners.

Created for the objectives to be aligned, the taxonomies provide a special framework and persistence for the objectives (Anderson & Kratwohl, 2001, p. 4). The taxonomy that was created by Benjamin Bloom could be said to be most famous one among other developed taxonomies. It could be said that the bloom taxonomy, which helps provide an answer for the question "What kind of changes will be observed in students at the end of the teaching", receives much criticism (Küçükahmet, 2000, p. 14). One of the criticisms that is received is the simplification of the relationship between thought and learning (Furst, 1994). Another criticism is the result that the difference between the upper and lower levels is not supported by researchers even though it separates teaching from a simple, unidimensional and behaviourist structure (Marzano & Kendall, 2007, p. 8). Within this scope, a new taxonomy has been developed by considering the criticisms despite the fact that taxonomy was renewed by Anderson and Kratwohl (2001, p. 4). The new taxonomy is two-dimensional and is shown in figure 1.
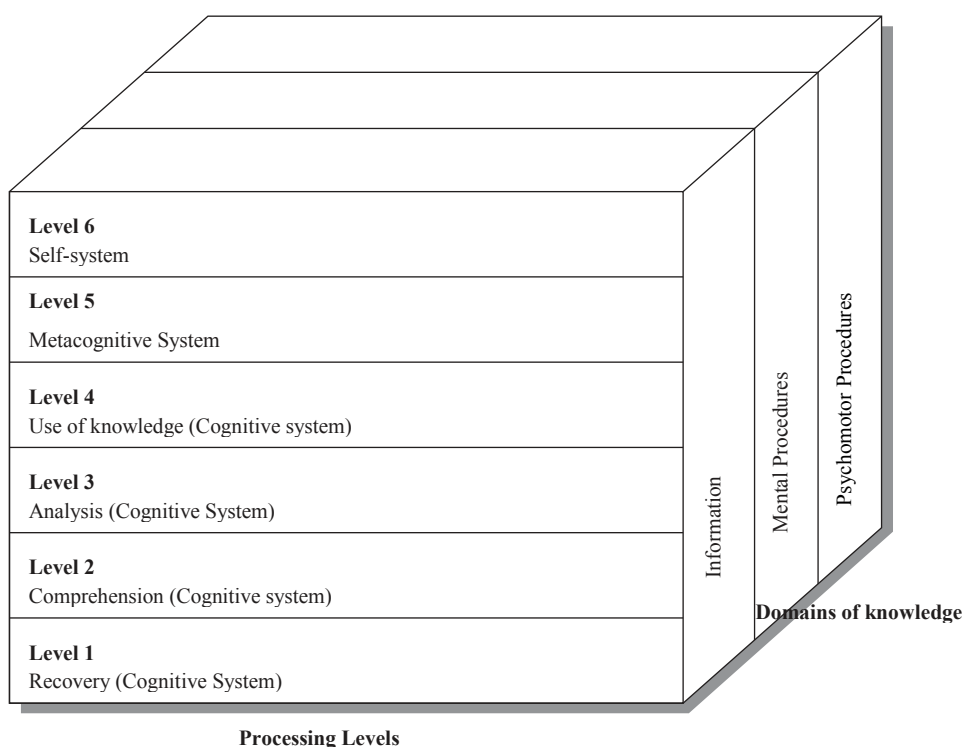

Figure 1. Marzano and Kendall's Taxonomy of Educational Objectives (2007, p. 13)

According to the Figure 1 where Marzano and Kendall's Taxonomy is shown, there are two dimensions which are mental procedure levels and domains of knowledge. "Domains of knowledge comprises of three fields which are information, Mental Procedures and Psychomotor Procedures. Domains of knowledge provides information about the quality of the objectives. Information field is

also called declarative information. Declarative information contains the regulation of the ideas which includes principles and generalizations and the details that includes words, facts and time series. Mental procedures, on the other hand are called ''procedural information''. Procedural information comprises of two components which are macro-procedures and skills that involves simple rules, algorithm and tactics. While the information or the declarative information is considered as an answer for ''what'', mental procedures or procedural information is the answer for ''how to do''. Psychomotor operations, on the other hand, are the physical operations that the individual makes use of to participate in daily activities. Psychomotor procedures are categorized as skills that involve simple combinational procedures and procedures that involve complex combinational procedures (Marzano & Kendall, 2007, p. 23-32). To sum up, mental and psychomotor procedures focus on being productive, whereas the information field of domain of knowledge is based on propositions.

Level 6, which is another component of taxonomy and is considered to be mental procedures, consists of three different parts. While the first one is cognitive system that contains the levels of recovery, comprehension, analysis and use of knowledge; the other two parts are metacognitive and self-system (Marzano &Kendall, 2007, p. 35). Thus, these systems, levels, sub-dimensions and the qualities of these levels are shown in Table 1.

Table 1. Marzano and Kendall Taxonomy based on Systems and Levels

Procedures (Systems)	Sub-dimensions	Qualities
SELF-SYSTEM	Examining motivation	The student can determine the motivation level and the reasons of the level to improve informational, mental and psychomotor procedures.
	Examining emotions	The student can determine emotional response levels and the reasons of responses of informational, mental and psychomotor procedures.
	Examining efficacy	The student can determine his/her own efficacy level and question what lies behind this perception to learn informational, mental and psychomotor procedures.
	Examining importance	The student can determine the importance of informational, mental and psychomotor procedures for himself and question what lies behind this perception.
METACOGNITIVE SYSTEM	Monitoring Accuracy	The student can determine the degree of accuracy for informational, mental and psychomotor procedures.
	Monitoring Clarity	The student can determine the degree of clarity for informational, mental and psychomotor procedures.
	Process Monitoring	The student can monitor the process oriented towards the purpose that were formed according to informational, mental and psychomotor procedures.
	Specifying Goals	The student can prepare a plan to reach the goal by creating goals based on informational, mental and psychomotor procedures.

COGNITIVE SYSTEM	KNOWLEDGE UTILIZATION	Investigating	The student can use informational, mental and psychomotor procedures or carry out research about them.
		Experimenting	The student can use informational, mental and psychomotor procedures to generate and test hypotheses or create and test hypotheses about informational, mental and psychomotor procedures.
		Problem-Solving	The student can use informational, mental and psychomotor procedures to solve problems or solve the problems about informational, mental and psychomotor procedures.
		Decision-Making	The student can use informational, mental and psychomotor procedures in decision-making or make decisions about informational, mental and psychomotor procedures.
	ANALYSIS	Specifying	The student can specify the logical results of informational, mental and psychomotor procedures.
		Generalizing	The student can generate new principles and generalizations based on informational, mental and psychomotor procedures.
		Analyzing the mistake	The student can identify the mistakes in the presentation or utilizations of informational, mental and psychomotor procedures.
		Classifying	The student can identify the upper and lower categories which informational, mental and psychomotor procedures depend on.
		Matching	The student can identify the important similarities and differences about informational, mental and psychomotor procedures.
	COMPREHENSION	Symbolizing	The student can present the critical and crucial elements of informational, mental and psychomotor procedures in a symbolic way.
		Integrating	The student can identify the basic structure and critical aspects of informational, mental and psychomotor procedures.
	RETRIEVAL	Executing	The student can fulfill the procedures without a major mistake. However, he/she may not understand how and why the procedures have occurred.
		Recalling	The student may know the properties of knowledge; yet may not understand its structure or break it down into its important and critical components.
		Recognizing	The student may confirm the knowledge; yet may not be able to understand the structure of it and break it down to its import and critical components.

Source: Marzano and Kendall (2008, p. 4-5)

It could be said that this developed taxonomy involves hierarchical thinking structures in the classification of the objectives in education. Stating that the objectives can be evaluated within the scope of the sub-dimensions of six mental processes and three components of the domains of knowledge, Marzano and Kendall's (2007, p. 14) self-system, which is the fifth level of the three

systems, establishes a bond between the determination of beliefs, attitudes and goals and the motivation of the individual. Metacognitive system on the other hand, is about fulfilling a task and is closely related to the self-system. As a matter of fact, these two systems can be acknowledged as the indicator of the level of motivation for the fulfillment of the tasks (Marzano, 2001, p. 11-12).

Cognitive system consists of recovery, comprehension analysis and use of knowledge levels and is different from Bloom's taxonomy as stated by Karadağ and Kaya (2017). As a matter of fact, although each level has sub-dimensions, it is clear that skills are emphasized in the level of using knowledge, which is the top step of cognitive system. As a matter of fact, the 2009, 2015 and 2019 curriculums have been discussed on the basis of basic life studies since the 2005 life studies curriculum. Decision-making, problem-solving, questioning and investigating in this step are the skills that are aimed to be acquired. In this context, analyzing the life studies curriculum objectives will enable both the knowledge and skill dimensions of the curriculum to be dealt with according to Marzano and Kendall Taxonomy. Besides, considering that the objectives, which are the most important parts of the curriculum, are directory in the implementation and evaluation of the curriculum, it also gains importance in the evaluation of the 2015 and 2018 life studies curricula according to the Marzano and Kendall Taxonomy. This is because it is indicated that there is not much a of a difference between the objectives of 2018 life studies curriculum and 2015 life studies curriculum (Yıldırım, 2020). In addition, it is hoped that the analysis of the objectives in the life studies curriculum, which aims one to know themselves and adapt to the society they live in, according to the Marzano and Kendall taxonomy will be a guidance for the experts who prepared the curriculum for the mental procedures and domains of knowledge of the objectives .It is thought that this research will give an idea to the field experts about the distribution of the objectives of life studies teaching, the content, learning-teacher process and the dimensions of evaluation and the suitability of the objectives for the students. Also, it is hoped that it will be a guidance for the classroom teachers who implement the curriculum by preparing lesson and daily plans and play a role in the creation, organization and evaluation of the curriculum about the knowledge, skill and affective dimensions of the objectives. As a matter of fact, Marzano and Kendall Taxonomy is not only a categorization of the objectives; it could also be used to evaluate whether student can fulfill the objectives or not.

In this study, which analyzes the distribution according to the Marzano and Kendall taxonomy, answers to the following questions have been sought:

- What is the distribution of the objectives of the 2015 and 2018 life studies curriculums according to the Marzano and Kendall taxonomy? How are the objectives are distributed according to mental procedures and domains of knowledge?
- What is the distribution of the objectives of the 2015 and 2018 life studies curricula in terms of levels of grade according to Marzano and Kendall Taxonomy?

Method

Research Model

The document review method has been used in this study, which aims to analyze the first second and third grade objectives according to Marzano and Kendall Taxonomy. Document review is the examination of books, magazines, newspapers, etc. that contain information about the phenomenon or facts aimed in the research and it is also the examination of the sources such as movie, archive that are suitable for the subject of the research (Yıldırım & Şimşek, 2013, p. 217-219). Document review is used as an independent method as well as being a complementary data tool for other research methods (Kıral, 2020; Bowen, 2009; Hodder, 2000). The reason for using document review in this study is to provide a systematic review of the objectives of the 2015 and 2018 life studies curriculum.

Data Source

In the 2015 life studies curriculum approved and implemented by the ministry of national education, board of education and discipne, a total of 146 objectives and their explanations (MoNE, 2015) were examined, 54 for the first grade, 49 for the second grade and 43 for the third grade. Besides, 53 objectives and their explanations (MoNE, 2018) prepared for first graders, 50 for second graders and 45 for third graders in the 2018 life studies curriculum were discussed.

Data Collection and Analysis

The research data were collected by document review. The documents used in the research were obtained from the 2015 and 2018 life studies curriculums on the website of the Ministry of National Education, Board of Education and Discipline. In the research, a from was prepared to examine the compliance of the objectives with the education taxonomy. In the preparation of the form, a teacher observation form in the book "The New Taxonomy of Educational Objectives'' which includes information about taxonomy by Marzano and Kendall (2007) and the book "Designing A New Taxonomy of Educational Objectives was used. Since the taxonomy is two-dimensional, the prepared form was prepared in two dimensions in accordance with the processes, sub-dimensions and domains of knowledge and is shown in Table 2.

Table 2. Marzano and Kendall Taxonomy Evaluation Form

Procedures (Systems)	Sub-dimensions	Domain of knowledge		
		Knowledge	Mental Procedures	Psychomotor Procedures
SELF-SYSTEM	Examining motivation			
	Examining emotions			

		Examining efficacy
		Examining importance
	METACOGNITIVE SYSTEM	Monitoring Accuracy
		Monitoring Clarity
		Process Monitoring
		Specifying Goals
	KNOWLEDGE UTILIZATION	Investigating
		Experimenting
		Problem-Solving
		Decision-Making
COGNITIVE SYSTEM	ANALYSIS	Specifying
		Generalizing
		Analyzing the mistake
		Classifying
		Matching
	COMPREHENSION	Symbolizing
		Integrating
	RETRIEVAL	Executing
		Recalling
		Recognizing

According to Table 2 in which the evaluation form of Marzano and Kendall Taxonomy is shown, there are informational, mental and psychomotor procedures that include the domains of knowledge of the objectives and cognitive, meta-cognitive and self-system where mental procedures are handled. While evaluating the objectives, the level was determined by the explanations about the mental procedure as shown in Table 1. In addition, the domain of knowledge was created by determining the area of the objective in knowledge, mental and psychomotor procedures. This is how a table was created according to the mental procedure of the objective and the domain of knowledge. For instance; in the recognizing stage, which is the sub-dimension of the retrieval level, an objective is discussed in a domain of knowledge, mental procedures or psychomotor tasks. In other words; the objective "Participates in an in-class meeting event." can be handled in the sub-dimension of recognizing based on the description ''The student will be able to verify the knowledge; yet may not understand the structure of it and break it down into its important and critical components.''. Since it includes a physical activity as a domain of knowledge and it is on the area of psychomotor procedure,

this objective is in the recognizing sub-dimension of the retrieval level and is discussed in the area of psychomotor procedures as a domain of knowledge.

For the codification, it was coded as ''class level, unit number, objective number'' according to the MoNE (2015) explanations. To illustrate with an example; in the codification of "1.2.3.", "1'' is class level", "2'' is unit number and ''3'' is objective number. Therefore, the declared objective demonstrates the third objective in the second unit of the first-grade life studies curriculum.

To establish reliability in the study, multiple analysis triangulation was practiced. Multiple analysis triangulation is the analysis of the same qualitative data and the comparison of the findings by two or more researchers (Patton, 2018, p. 560). In this context, in accordance with the form created, the objectives have been evaluated by the researcher and a classroom teacher. Miles and Huberman (1994, p. 64) coding reliability formula has been used for the distribution made by the coders. The indicated formula is as follows:

$$\text{Reliability} = \frac{Consensus}{Consensus + disagreement}$$

As a result of the analysis, a consensus was achieved in 145 objectives out of 146 objectives of the 2015 life studies curriculum and it was concluded that the distributions created were 99% similar. A consensus was achieved in 146 objectives out of 148 objectives of the 2018 life studies curriculum and it was concluded that the distributions created were 99% similar. The reasons for the objectives for which the similarity could not be achieved were discussed and reevaluated by the coders within the framework of taxonomy explanations and discussed with a common consensus.

Results

In this study, which studies the 2015 and 2018 life studies curriculum objectives according to the Marzano and Kendall Taxonomy, the findings found according to the grade levels of the objectives are presented. The distribution of the objectives in the 2015 life studies curriculum according to the Marzano and Kendall Taxonomy is shown in Table 3.

Table 3. Distribution of the objectives in the 2015 life studies curriculum according to the Marzano and Kendall Taxonomy

Procedures	Sub-dimensions	Domain of knowledge			Total
		Knowledge	Mental Procedures	Psychomotor Procedures	
SELF-SYSTEM	Examining motivation	1.1.14	2.1.2 3.1.5		3
	Examining importance	2.5.4 2.5.5	1.2.4. 3.5.5 3.1.4	2.3.5 3.5.6	7

METACOGNITION	Process Monitoring	2.1.8					1
KNOWLEDGE UTILIZATION	Investigating				3.5.3		1
	Problem-Solving	3.4.10 3.6.7	3.2.6 3.4.7	3.4.8 3.4.9	1.6.8 2.6.10 3.1.3	3.6.1 3.6.6	11
	Decision-Making	1.2.6			1.3.3 2.1.4	2.4.4	4
ANALYSIS	Specifying	2.6.3	2.6.1	3.6.4	2.6.9		4
	Classifying		1.3.7	3.5.4			2
	Matching		3.2.5 3.5.8	3.6.2 3.6.3			4
COMPREHENSION	Symbolizing				3.1.1	3.2.1	2
	Integrating	1.3.8 2.4.3 2.5.6 3.4.1	1.3.11 1.5.6 2.5.7 2.6.2	2.6.6 2.6.8 3.5.9	1.1.2 1.1.8 1.1.11 1.2.2 1.3.4 1.3.5 2.1.5	2.1.6 2.1.9 2.1.11 2.3.2 3.1.6 3.3.2 3.3.3	25
RETRIEVAL	Executing		1.3.12 2.3.7 3.3.5		1.1.6 1.1.7 1.1.12 1.2.1 1.3.1 1.3.2 1.4.1 1.4.2 1.4.3	2.1.10 2.3.3 2.4.1 2.4.2 2.4.5 3.2.2 3.2.3 3.3.1 3.6.5	21
	Recalling	1.5.4 1.6.1 1.6.2 2.3.4	1.5.2 1.5.3 1.6.4 2.2.2 2.2.4 2.2.6	2.3.1 2.4.7 2.5.1 2.6.7 3.2.2 3.2.4 3.5.2	1.2.5 1.6.3 1.6.5 1.6.6 2.1.1 2.1.3 2.1.7 2.2.3	2.5.2 2.5.5 2.6.5 3.1.2 3.3.4 3.5.7	31

	1.1.3	1.5.1.	1.4.5	2.4.8	1.1.1	1.3.10	
	1.1.4	1.5.7	1.4.6.	3.4.3	1.1.10	2.5.3	
	1.1.5	1.6.7	2.2.5	3.4.4	1.1.13	2.6.4	
Recognizing	1.1.9	2.2.1	2.3.6.	3.4.5		3.5.1	30
	1.3.6	2.4.6			1.3.9		
	1.4.4	3.4.2					
	1.4.7	3.4.6					
Total	30		48		68		146

In Table 3, in which the distribution of the 2015 life studies curriculum objectives according to the Marzano and Kendall Taxonomy are shown, it is seen that the highest objective is at the ''retrieval'' and ''comprehension'' level of the cognitive system among the 3 systems in which mental procedures are discussed. As a matter of fact, there are 30 objectives in the ''recognition'' sub-dimension of the ''retrieval'' level, 31 in the comprehension sub-dimension and 21 in the ''execution'' sub-dimension. In other words, there are 83 objectives in total at the ''retrieval'' level. At the ''comprehension'' level, 25 of the objectives are in the ''integrating'' sub-dimension while 2 of the objectives are in the ''symbolizing'' sub-dimension. Again, there are 10 objectives in total at the ''analysis level''. However, there are 16 objectives in total at the level of ''knowledge utilization'' that includes the sub-dimensions of decision-making (4), problem-solving (11) and investigating (1), which are aimed to be acquired as a skill in the curriculum. While there is one objective in the other system, ''metacognitive system'', there are 10 objectives in the self-system.

In short, when the three systems of the Marzano and Kendall Taxonomy are considered, 135 objectives are located in the cognitive system and are generally at the first and second levels. However, it is seen that objectives are decreased in number at higher levels. In addition, it can be said that the objectives in the curriculum as a skill and at the level of knowledge utilization are insufficient. However, there are no objective related to the ''generalizing'' and ''analyzing the mistake'' sub-dimensions of level three which is analysis procedure, the ''experimenting'' sub-dimension of Knowledge utilization level, the sub-dimensions of Metacognitive System such as ''Monitoring Accuracy'', ''Monitoring Clarity'' and ''specifying Goals'' and the sub-dimensions of Self-system such as ''Examining motivation'' and ''Examining efficacy''. As can be seen, the number of objectives decreases at the upper levels of the cognitive system. As a matter of fact, when the upper levels of the cognitive system are investigated, it is seen that it makes the student cognitively active in the procedure. It can be said that this situation negatively affects the student's learning to learn and her process of applying what she has learnt to daily life. Considering that the inadequacy of the objectives of the metacognitive system and self-system that emphasizes the motivation and affects the attitude of the individual towards the course will be effective on learning, it is thought that the program is insufficient in this context.

When mental processes are analyzed in the context of grade levels, it is seen that first-grade objectives are distributed in the sub-dimensions of recognizing (17), recalling (10) and execution (10) of the retrieval level and in the sub-dimension of integrating of the comprehension (15) level. The second-grade objectives are mostly collected in the sub-dimensions of recognizing (15) of the retrieval level and integrating sub-dimension (11) of the comprehension level. However, there are objectives at higher levels. Third grade objectives are difficult to explain in one level and sub-dimension. That's because, the third-class objectives at all levels are distributed in a normal way compared to the first and second-grade objectives. While the objectives in the first and second grades are generally at the lower levels, the objectives in the third grade are in the upper steps of the cognitive, metacognitive and self-systems. In this context, it can be said that the objectives of the first and second grade are insufficient, but that they are sufficient when they are distributed in all three systems the third grade.

When evaluated in the context of domains of knowledge; it can be seen that there are 30 objectives in the domain of knowledge, 48 in the field of mental operation, and 68 in the field of psychomotor operation. When examined in terms of grade levels, the first grade has 16 objectives in the domain of knowledge, 10 in the field of mental operations, and 26 in the field of psychomotor operations. Second-year objectives are 9 in the domain of knowledge, 17 in the field of mental operations, and 23 in the field of psychomotor operations. When we consider the third grade, there are 5 objectives in the domain of knowledge, 21 in the field of mental operations, and 17 in the field of psychomotor operations. Supposing that cognitive and psychomotor procedures and the propositions of the domain of knowledge are productive, it can be said that the program enables students to be productive. However, it is seen that the objectives related to the domain of knowledge are mostly in the recognizing sub-dimension, while the objectives related to mental operations are in the comprehension sub-dimension. Although the psychomotor operations are mostly found in the execution sub-dimension, the number of objectives in comprehension and combining steps is in the majority. Since the domains of knowledge in the curriculum are located at the lower levels of the cognitive system, this situation gives rise to the limitation of the student's being productive. Although this situation makes the curriculum students active, it can be said that it impedes their creativity.

The distribution of the objectives in the 2018 Life Studies Curriculum according to the Marzano and Kendall Taxonomy is shown in Table 4.

Table 4. The distribution of the objectives in the 2018 Life Studies Curriculum according to Marzano and Kendall Taxonomy

Procedures	Sub-dimensions	Knowledge		Mental operations		Psychomotor operations		N
SELF-SYSTEM	Examining Emotions	2.4.5		1.1.14 1.1.15	2.1.2 2.1.6	2.2.7 2.5.7	3.1.7	8
	Examining importance	1.1.16 2.5.2 3.2.2	3.6.1	1.5.6 1.5.7 1.6.3	1.6.4 2.6.2	3.6.5		10
KNOWLEDGE UTILIZATION	Investigating	2.5.3 3.5.8	3.5.9 3.6.2	1.6.7 2.2.6 2.5.6	2.6.9 3.1.10 3.5.6	3.5.3		11
	Problem-solving	3.4.3		2.6.7 3.1.9	3.2.6 3.4.6	3.5.7		6
	Decision-making			1.2.6 2.2.5	2.3.7	1.1.17 2.1.3	2.1.4 2.2.8	7
ANALYSİS	Specifying	3.5.4		3.1.6 3.3.5	3.4.2 3.6.6	1.4.4 1.6.2 2.6.4	2.1.11 3.3.3 3.3.4	11
	Classifying	2.4.1		1.6.5	2.6.1			3
	Matching	2.5.4 2.5.5		1.1.2 2.3.1 3.1.2	3.1.3 3.2.1	2.1.1		8
COMPREHENSION	Symbolizing					3.1.5	3.2.3	2
	Integrating	3.1.4		1.4.7 1.5.4 2.2.9 2.5.8 2.6.3	3.1.1 3.2.7 3.2.8 3.6.4	1.1.11 1.3.3 1.3.4 1.3.7 1.4.2 1.4.3 1.6.1	2.1.7 2.1.8 2.3.2 2.4.2 3.3.1 3.3.2 3.5.5	24
RETRIEVAL	Executing			1.1.8 1.2.7 3.2.5		1.1.3 1.3.1 1.3.5 1.4.1 2.1.9 2.2.1	2.1.10 2.4.3 2.4.6 3.1.8 3.4.7	14
	Recalling	2.6.5 3.4.4 3.4.5		1.2.2 1.3.2 1.5.2 1.6.8	2.2.4 2.3.6 2.6.6 3.5.2	1.1.10 1.1.12 1.1.13 1.2.3 1.2.4 1.2.5 2.3.3	1.3.6 1.6.6 2.1.5 2.6.8 3.2.4 3.4.1 3.6.3	25
	Recognizing	1.1.5 1.1.7 1.1.9 1.4.5 1.5.1	1.5.5 2.2.3 2.3.4 2.4.4	1.1.6 1.5.3	2.2.2 2.3.5 3.5.1	1.1.1 1.1.4 1.2.1	1.4.6 2.5.1	19
N		27		58		63		148

In Table 4, in which the distribution of the objectives of 2018 life studies curriculum according to Marzano and Kendall Taxonomy is shown, it is seen that the highest amount of objective has been achieved in the cognitive system out of the three systems, where mental

procedures are discussed. Within the cognitive system, there are more objectives at the level of ''retrieval and ''comprehension'' of the distribution of the objectives compared to the other levels. In addition, the first level, "retrieval", has 19 objectives in the recognizing sub-dimension, 25 in the comprehension sub-dimension, and 14 in the execution sub-dimension. In other words, there are 58 objectives in total at the retrieval level. In addition, at the "comprehension" level, 24 of the objectives are in the integrating sub-dimension, while 2 of the objectives are in the symbolizing sub-dimension. However, there are a total of 22 objectives in the analysis process. In the curriculum, there are a total of 24 objectives at the level of "knowledge utilization", which includes decision making (7), problem solving (6) and investigating (11) as sub-dimensions. While there are no objectives in the other system, the metacognitive system, there are 18 objectives in the self-system. Considering the levels of the objectives, the fact that they are mostly at the lowest level of the cognitive system and that there are not objectives related to meta-cognitive system shows that the cognitive procedures of the students are negatively affected and that students are not allowed to regulate their own learning.

When compared to the objectives of the 2015 life studies curriculum, it can be said that the 2018 Life studies curriculum objectives demonstrate a more natural distribution according to the Marzano and Kendall Taxonomy. However, it is seen that the distribution of objectives is generally at the level of "retrieval" and "comprehension" of the cognitive system within the context of mental procedures in both curricula. In addition, while the number of objectives related to the level of application of knowledge specified as a skill in the 2015 life studies curriculum was low, more objectives were included in the 2018 life studies curriculum. However, it is seen that the objectives of the 2018 life studies curriculum are not included in the metacognitive system that allows the individual to regulate their own learning. As a matter of fact, considering the fact that the absence of the objectives related to meta-cognitive system that highlights the motivation level of the individual will also be effective in regulating the students' learning, it is thought that the curriculum is insufficient in this context. However, there are no objectives in the dimensions of "generalizing" and "analyzing the mistake" at the analysis level, "experimenting" at the level of knowledge utilization, and "examining motivation" of the self-system, "examining efficacy". In this context, it is seen that the 2018 life studies curriculum is similar to the 2015 life studies curriculum and it shows that the upper mental procedures are not sufficiently included in the curriculum. In addition, it can be said that it is the deficiency of the curriculum that there are no objectives in 2018 and 1 objective in 2015.

Although it is seen that the objectives in the first grade are mostly distributed in the sub-dimensions of "retrieval" level (12) and comprehension (12), there are objectives at every level when the grade levels are examined. The fact that there are no objectives related to first grade at all levels in the 2015 life studies curriculum shows that the 2018 curriculum was organized in this context. When the second-grade objectives are considered, it is seen that the objectives are distributed in the sub-dimensions of recognizing (6), recalling (7) and execution (5) of the level of "retrieval" and in the

dimension of combining (7) of the level of "comprehension". In addition, it is seen that the second-grade objectives include the upper levels of the cognitive system, the metacognitive system and the self-system objectives according to the 2015 life studies curriculum. Although there are objectives in every level and sub-dimension, the third-grade objectives are not collected at a specific level or sub-dimension.

When evaluated in the context of the domains of knowledge; The 2018 life studies curriculum has 27 objectives in the domain of knowledge, 58 in the field of mental operation, and 63 in the field of psychomotor operations. It is seen that the objectives related to the domain of knowledge are generally in the sub-dimension of recognizing (9), while the objectives related to mental operations are mostly found in the sub-dimension of recalling (8) and integrating (9). On the other hand, psychomotor operational objectives are mostly in the sub-dimensions of recalling (14) and integrating (14). When the domains of knowledge are examined in the context of grade levels, there are 7 objectives in the domain of knowledge, 17 in the field of mental operations and 27 in the field of psychomotor operations in the first grade. In the second grade, there are 10 objectives in the domain of knowledge, 19 in the field of mental procedures, and 21 in the field of psychomotor operation. Third grade objectives are 10 in the domain of knowledge, 19 in the field of mental operations, and 15 in the field of psychomotor operations. In the context of domains of knowledge, it can be said that the 2015 life studies curriculum and the 2018 life studies curriculum are similar. In this context, the fact that the objectives of both 2015 and 2018 life studies curricula are mostly at the level of mental and psychomotor operation provide primary school students with more experience; However, the fact that these objectives are at the lower levels of the cognitive system is thought to prevent creativity.

Discussion, Conclusion and Recommendations

Considering that education helps the individual to adapt to the society he lives in, it can be said that the importance of primary school has increased. Educational curriculums are prepared in order for the individual to recognize both himself and the society in which he lives. One of the curricula prepared in this context is life studies, which is taught in the first three years of primary school. It was created in 1926 within the framework of the principle of collective education and was rearranged in 1936, 1948, 1968, 1998, 2005, 2009, 2015 and finally 2018 according to the conditions of the era. It can be said that the distribution of the prepared curriculum objectives will be a guide for the evaluation of the curriculum. In this context, it is considered to be important that the taxonomic distribution of the 2015 and its rearranged version, 2018 curriculum objectives of the life studies curriculum, will provide feedback both to the evaluation of the curriculum and to the preparers and practitioners of the curriculum. In this context, the Marzano and Kendall Taxonomy, which deals with the objectives two-dimensionally, and the objectives of the 2015 and 2018 life studies curriculum have been studied.

When the 2015 life studies curriculum objectives are considered in the context of three levels of Marzano and Kendall Taxonomy, it has been concluded that the objectives are generally included in the cognitive system including the levels of retrieval, comprehension, analysis and knowledge utilization. While there are more objectives at the level of retrieval and comprehension of the cognitive system, it is seen that the sub-dimensions of the level of knowledge utilization such as decision-making, problem-solving and investigating, which are specified as skills within the scope of the curriculum, are not included enough. In the 2018 life studies curriculum, the objectives are mostly at the level of retrieval and comprehension of the cognitive system. It can be said that Eker, Bilgin, and Baykan (2019), who analyzed the 2018 life studies curriculum according to Bloom's taxonomy, are in consensus with the result that the objectives are generally in the cognitive dimension. In addition, the investigating and decision-making sub-dimension, which is included as a skill in the 2018 curriculum, had more objectives compared to the 2015 life studies curriculum. The finding that students do not acquire enough of decision-making and problem-solving skills by Öztürk (2015), who examines the life studies curriculum according to teachers' opinions, supports this situation. As a result of Şenay's (2015) research, it was concluded that the life studies curriculum is not sufficient to develop students' problem-solving and decision-making skills. Again, according to the research conducted by Baysal, Demirbaş- Nemli, Özçelik, and Güneypınar (2020), students' decision-making skills are at a moderate level. In addition, in the study of Güzel, Berberoğlu, Demirtaşlı, Arıkan, and Tuncer (2009) in which the primary school curriculums were analyzed, it was concluded that the students could not acquire the objectives and skills. As a matter of fact, although there are more objectives at the level of application of knowledge in the 2018 life studies curriculum, it can be said that this situation is not capable of improving students' investigating, problem-solving and decision-making skills, which is also supported by the studies in the literature.

While there is one objective in the sub-dimension of process monitoring in the 2015 life studies curriculum regarding the metacognitive system, which is accepted as an indicator of the individual's motivation level and is the other system of taxonomy, there is no objective in the 2018 life studies curriculum. The fact that the individual has knowledge about his/her own cognitive procedures and the objectives of metacognition, which is defined as the ability to manage these procedures, are low in number (Krathwohl, 2002), causes the students not to recognize, think and question the knowledge they have. In addition, it can be said that this process is also negatively affected when it is considered that metacognitive learning begins and develops from the age of three and the individual controls his own learning and memory through metacognitive learning (Karakelle & Şentürk, 2006). As a matter of fact, the lack of objectives in the metacognitive system shows that the curriculum is incomplete when it is considered that the life studies course brings awareness of individual existence (Topses, 2001, p. 5).

While there are 18 objectives in the 2018 life studies curriculum, there are 10 objectives in the 2015 life studies curriculum in the self-system, which is the last system of taxonomy and is considered to be important for establishing a connection between the values, attitudes and beliefs of the individual. It is thought that this situation will affect the motivation and learning of the individual. Lee, Kim, Jin, Yoon, and Matsubara (2017) state that the metacognitive system and the self-system are the basis of provision of learning. However, in the 2015 and 2018 life studies curricula, it is seen that the distribution of the objectives according the three systems of Marzano and Kendall Taxonomy is not balanced and that the cognitive system is emphasized more. Özgüç (2019), who examined the 2009, 2015 and 2018 second grade life studies curriculum within the framework of teachers' opinions, is in consensus with the result that the objectives and skills are not suitable for the cognitive, affective and psychomotor development levels of the students and that the life studies course does not provide enough of opportunities for self-regulation. Karadağ and Kaya (2017), who examined the primary school fourth grade curriculum according to the Marzano Taxonomy, support the finding that the objectives mostly take place in the cognitive system in the context of the curriculums they examined. In addition, when Karacaoğlu (2020) made his taxonomic analysis of the second-grade level of the life studies curriculum, he arrived to the conclusion that the objectives were generally distributed as cognitive and affective. This is in line with the finding of Eker, Bilgin, and Baykan (2019) that the curriculum does not include upper-level steps.

Taking the curriculum into consideration in the context of grade levels, it is seen that there were no first-grade objectives at all levels in the 2015 life studies curriculum. However; that this situation has been regulated in the 2018 curriculum. Considering the second-grade objectives; while there are no objectives for the upper levels of the cognitive system, metacognitive system and self-system according to the 2015 Life studies curriculum, there is only one objective in the 2018 life studies curriculum. Although the third-grade objectives are in every level and sub-dimension in both the 2015 and 2018 life studies curriculum, they are not collected at a certain level or sub-dimension.

When the 2015 and 2018 life studies curricula are considered according to the Marzano and Kendall Taxonomy, it is thought that the higher amounts of objectives in mental and psychomotor processes will increase the effectiveness of the curriculum. As a matter of fact, the fact that the objectives of domains of knowledge are at the level of retrieval and comprehension of the cognitive system in both the 2015 and 2018 life studies curriculum prevents students from being creative. The finding of Eker, Bilgin, and Baykan (2019) also supports this situation. However, the conclusion of Ulum (2017), who dealt with the primary school Turkish curriculum according to Bloom's Taxonomy, that the curriculum generally handled low-level skills and did not include high-level mental skills, and the conclusion of Değirmenci (2018) that primary school 4th grade course objectives were insufficient in terms of metacognitive knowledge and the conclusions of Başar (2005) that the educational objectives in the 2005 primary school 4th grade science and technology curriculum are not sufficient

for students to reach high-level cognitive, affective and psychomotor learning levels are in line with the findings of the research.

The following recommendations can be made according to the results obtained:

- Regarding that the objectives for the cognitive system, which is the first system of the mental procedure, are generally at a low level, the curriculum should be revised in order for students to be able to acquire skills at the higher level of the cognitive system.

- It could be said that the regulation of the curriculum that is oriented towards Metacognitive and Self-system objectives, which are accepted as indicator of students' motivation levels and are based on questioning their own knowledge, will be effective in motivating students for the Life Studies course and acquiring skills.

- It is thought that the equal distribution of the objectives of both the cognitive system and the metacognitive and self-system at grade levels will support the cognitive and affective development of students.

- Considering the fact that Marzano and Kendall Taxonomy can also be used for student evaluation, it is thought classroom observations, examination of student product files and textbooks will be of guidance in the evaluation of the life studies curriculum.

References

Anderson, L.W., Krathwohl, D. R., Airasian, P. W., Cruikshank, K. A., Mayer, R. E., Pintrich, P. R. (Eds.). (2001). *A taxonomy for learning, teaching, and assessing: A revision of Bloom's taxonomy of educational objectives*. New York: Longman.

Akpınar, B. (2010). *Eğitim programları ve öğretim*. Ankara: Data.

Ayvacı, H. Ş., Nedim, A. L. E. V. ve Yıldız, M. (2014). Öğrenme kazanımlarının tasarlanma sürecine ilişkin lisansüstü öğrencilerinin zihinsel modellerini belirlemeye yönelik bir çalışma. *Kastamonu Eğitim Dergisi,* 23(3), 1013-1030.

Başar, T. (2009). 2005 yılı ilköğretim 4. sınıf fen ve teknoloji dersi öğretim programı eğitim hedeflerinin taksonomik analizi. (Tez No: 249756). [Yüksek Lisans, Gaziosmanpaşa Üniversitesi Sosyal Bilimler Enstitüsü- Tokat]. Yükseköğretim Kurulu Ulusal Tez Merkezi Veri Tabanı

Binbaşıoğlu, C. (2003). *Hayat bilgisi öğretimi.* Ankara: Nobel.

Bowen, G. A. (2009). Document analysis as a qualitative research method. *Qualitative Research Journal,* 9 (2), 27-40. https://doi.org/10.3316/QRJ0902027

Chatterjee, D., & Corral, J. (2017). How to write well-defined learning objectives. *The Journal Of Education In Perioperative Medicine* (JEPM), 19(4), E610.

Cicioğlu, H. (1982). *Türkiye Cumhuriyeti'nde ilk ve ortaöğretim: tarihi gelişimi*. Ankara: Ankara Üniversitesi Dil ve Tarih-Coğrafya Fakültesi.

Değirmenci, T. (2018). *İlköğretim 4. sınıf Türkçe, matematik, fen bilimleri, sosyal bilgiler öğretim programlarının üstbilişsel açıdan incelenmesi.* (Tez No: 503570). [Yüksek Lisans Tezi, İstanbul Aydın Üniversitesi Sosyal Bilimler Enstitüsü- İstanbul]. Yükseköğretim Kurulu Ulusal Tez Merkezi Veri Tabanı.

Eker, C., Bilgin, Ç. ve Baykan, E. (Eylül, 2019). Hayat bilgisi dersi öğretim programı kazanımlarının yenilenmiş Bloom taksonomisine göre değerlendirilmesi. *II. Uluslararası Öğrenme, Öğretim ve Eğitim Araştırmaları Kongresi*, Amasya Üniversitesi Eğitim Fakültesi, 5-7 Eylül 2019, Amasya.

Furst, E. J. (1994). Bloom's taxonomy: Philosophical and educational issues. L. W. Anderson & L. A. Sosniak (Eds.), *Bloom's taxonomy: A forty-year retrospective: Ninety-third yearbook of the National Society for the Study of Education*. Chicago: University of Chicago.

Güzel, Ç. İ., Berberoğlu, G., Demirtaşlı, N., Arıkan, S., & Tuncer, Ç. Ö. (2009). İlköğretim 1. ve 5. sınıflar arasındaki öğretim programlarının kapsam ve öğrenme çıktıları açısından değerlendirilmesi. *Cito Eğitim: Kuram ve Uygulama Dergisi,* 1, 10-48.

Hodder, I. (2000). The interpretation of documents and material culture. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of qualitative research,* Thousand Oaks, CA: Sage.

Karabağ, G., (2009). Hayat bilgisi dersinin tarihçesi. B. Tay (Ed.) *Hayat bilgisi öğretimi*. Ankara: Maya Akademi.

Karacaoğlu, Ö. C. (2020). 2. sınıf hayat bilgisi kazanımlarının alanyazındaki ölçütlere göre incelenmesi ve düzeylerinin belirlenmesi. *Kırşehir Eğitim Fakültesi Dergisi*, 21(1), 34-62. DOI:10.29299/kefad.2020.21.01.002

Karadağ, R., & Kaya, Ş. (2017). Marzano Taksonomisi'ne göre ilkokul programlarındaki kazanımların değerlendirilmesi: bir durum çalışması. *Kuramsal Eğitimbilim Dergisi*, 10(2), 220-250.

Karakelle, Ş. S. & Şentürk, C., (2006). Üst bilişsel düzeyi yüksek ve düşük öğrencilerin ebeveyn tutumlarının incelenmesi. *Psikoloji Çalışmaları*, 26, 45-56.

Kıral, B. (2020). Nitel bir veri analizi yöntemi olarak doküman analizi. *Siirt Üniversitesi Sosyal Bilimler Enstitüsü Dergisi, 8*(15), 170-189.

Krathwohl, D. R. (2002). A revision of Bloom's taxonomy: An overview. *Theory into practice*, *41*(4), 212-218

Küçükahmet, L. (2000). *Öğretimde planlama ve değerlendirme.* Ankara: Nobel.

Lee Y.J., Kim M., Jin Q., Yoon HG., Matsubara K. (2017) *Revised Bloom's Taxonomy—The Swiss Army Knife in curriculum research. In: East-Asian primary science curricula*. Springer Briefs in Education. Singapore: Springer,

Marzano, R. J. (2001). *Designing a new taxonomy of educational objectives: experts in assessment.* Thousand Oaks, CA: Sage.

Marzano, R. J., & Kendall, J. S. (Eds.). (2006). *The new taxonomy of educational objectives*. Thousand Oaks, CA: Sage.

Marzano, R. J., & Kendall, J. S. (Eds.). (2008). D*esigning and assessing educational objectives: Applying the new taxonomy.* Thousand Oaks, CA :Sage.

Ministry of National Education. [MoNE] (2005). Hayat bilgisi öğretim programları (ilkokul 1.2. ve 3. sınıflar). Ankara: Milli Eğitim Bakanlığı.

MoNE. (2015). *Hayat bilgisi öğretim programları (ilkokul 1.2. ve 3. sınıflar).* Ankara: Milli Eğitim Bakanlığı.

MoNE. (2018). *Hayat bilgisi öğretim programları (ilkokul 1.2. ve 3. sınıflar).* Ankara: Milli Eğitim Bakanlığı.

Miles, B., M. & Huberman, A., M. (1994). *Qualitative data analysis.* London: Sage.

Ornstein, A.C. ve Hunkins, F. P. (2016). *Eğitim programı* (Çev. A. Arı). Konya: Eğitim.

Özgüç, C. (2019). *İlkokul 2. sınıf hayat bilgisi dersi öğretim programının öğretmen görüşlerine göre değerlendirilmesi* (Tez No: 591714). [Yüksek lisans tezi, Yıldız Teknik Üniversitesi Sosyal Bilimler Enstitüsü- İstanbul]. Yükseköğretim Kurulu Ulusal Tez Merkezi Veri Tabanı.

Patton, M. Q. (2018). *Nitel araştırma ve değerlendirme yöntemleri.* (Çev. M. Bütün & S. B. Demir). Ankara: Pegem Akademi.

Resmi Gazete. (1949). *İnsan Hakları Evrensel Beyannamesi.* Sayı: 7217. Ankara: Başbakanlık

Resmi Gazete. (1982). *Türkiye Cumhuriyeti Anayasası.* Sayı: 17844 Ankara: Başbakanlık

Topses, G. (2001). Hayat Bilgisi ders kitabı inceleme kılavuzu hazırlama gerekçesi. L. Küçükahmet (Ed.), *Konu alanı ders kitabı inceleme kılavuzu-hayat bilgisi 1-3* (ss. 1-18). Ankara: Nobel.

Ulum, H. (2017). *MEB ilkokul 2, 3 ve 4. sınıf Türkçe ders ve çalışma kitaplarında yer alan etkinliklerin yenilenmiş Bloom taksonomisine göre incelenmesi.* (Tez No: 473546). [Yüksek Lisans Tezi, Mersin Üniversitesi Eğitim Bilimleri Enstitüsü-Mersin]. Yükseköğretim Kurulu Ulusal Tez Merkezi Veri Tabanı.

Yıldırım, A. & Şimşek, H. (2013). *Sosyal bilimlerde nitel araştırma.* Ankara: Seçkin.