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An Examination of The Revised Bloom's Taxonomy as a Model in the Curriculum Design Process

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Abstract

The aim of this study is to examine the Revised Bloom Taxonomy (RBT) as a model in the design of secondary school Turkish curriculum. With this aim, a curriculum has been designed and partly applied for the 5th, 6th, 7th and 8th grades of the secondary school Turkish course. According to the research questions, the review process was carried out in five steps. The research which covers the curriculum designing, implementation and evaluation processes was carried out according to the "Sequential Explanatory Design" of the "mixed method" in which qualitative and quantitative methods were used together. The part, in which the quantitative method is used in the research, is designed according to "the experimental design" with pretest-posttest control group. The qualitative part of the study, in order to check the effectiveness of the curriculum designed according to revised taxonomy, was an "action research". Different measurement tools coming from different and multiple environments were used in the data collection process. Internal and external evaluation and formative and summative evaluations were used in the assessment process. According to the results, it was determined that RBT can be used as a model in designing the curriculum.

Keywords: Revised Bloom's taxonomy, design of curriculum, model.

Öğretim Programı Tasarlama Sürecinde Yenilenmiş Bloom Taksonomisinin Bir Model Olarak İncelenmesi

Özet

Bu çalışmanın amacı, ortaokul Türkçe dersi öğretim programının tasarlanması sürecinde Yenilenmiş Bloom Taksonomisini (YBT) bir model olarak incelemektir. Bu amaca bağlı olarak ortaokul Türkçe dersinin 5, 6, 7 ve 8. sınıfları için öğretim programı tasarlanmış ve tasarlanan bu programın bir bölümü uygulanmıştır. Araştırma sorularına bağlı olarak inceleme süreci, beş aşamada gerçekleştirilmiştir. Öğretim programı tasarlama, uygulama ve değerlendirme süreçlerini kapsayan bu araştırmada nitel ve nicel yöntemlerin bir arada kullanıldığı "karma yöntem"in "açımlayıcı sıralı desen"i kullanılmıştır. Araştırmada nicel yöntemin kullanıldığı bölüm, öntest-sontest kontrol gruplu "deneysel desen"e göre tasarlanmıştır. Araştırmanın nitel bölümü ise "eylem araştırması"dır. Veri toplama sürecinde farklı ve çoklu bir evrenden gelen farklı ölçme araçları kullanılmıştır. Tasarlanan programının değerlendirilmesi sürecinde iç ve dış değerlendirme ile düzey belirleyici ve biçimlendirici değerlendirmelerin iç içe geçmiş yapısından yararlanılmıştır. Ulaşılan sonuçlara göre YBT'nin öğretim programı tasarlama sürecinde bir model olarak kullanılabileceği görülmüştür.

Anahtar Kelimeler: Yenilenmiş Bloom taksonomisi, öğretim programı düzenleme, model.

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INTRODUCTION

Occupying an important place in education since 1950's, Bloom's Taxonomy (BT) today still reserves this position and continues to help researchers, teachers and students. Therefore, the taxonomy has been one of the most prominent reference sources of researchers (Forehand, 2006; Seddon, 1978). In accordance with the results of the studies conducted, Bloom et al. focused on the classification about the cognitive domains of the taxonomy amplified and improved it. In line especially with the scientific and technological developments, BT has been revised with an aim to be used more efficiently and functionally in the education – teaching process (Anderson, Krathwohl, Airasian, Cruikshank, Mayer, Pintrich, Raths & Wittrock, 2001). Based on the developments and needs in education, Anderson et al. made some changes on BT and added new aspects and published the Revised Bloom's Taxonomy (RBT) in 2001. In RBT, knowledge and cognitive process aspects of educational goals are defined more specifically and are handled in two main categories. Also, the boundaries of sub-cognitive processes in the six cognitive domains of BT have been made more specific. Although Anderson et al. (2001) aimed to ensure that wider masses could reach the taxonomy by revising it, they emphasized that the main target audience were teachers as their main aim was to enable the taxonomy to be used as an efficient tool in the education-teaching process. Researchers emphasizing the need to establish curricula on certain standards so that the accountability in education could be more efficient focused on the efficient teaching of teachers and efficient learning processes of students with this approach. Therefore, they frequently emphasized the changes about the goals in the taxonomy. The revised taxonomy aimed to guide and assist teachers in planning and practicing suitable teaching processes as well as preparing valid assessment processes and creating efficient strategies (Anderson et al., 2001, p. 11). During the revision process of the taxonomy in accordance with the specified aim, the researchers took the following three points into consideration: First, examining and expanding the approaches of the original taxonomy without falling out of its scope. Second, preparing the taxonomy in a language that is understandable to everyone so that it can be used by everybody. Third, making use of real practice examples (authentic classroom practices by teachers) while explaining the revisions in the taxonomy in order to bring the reality of the taxonomy into forefront.

While classifying the goals in the revised taxonomy, the verb and noun structure that comprises the goal was taken as a basis. So, the part of the goal that is formed with the verb the cognitive processes and the part formed with the noun was constructed as the knowledge types. The verb part of the goal includes the cognitive processes that the students are supposed to reach; and the noun part of the goal includes the knowledge that the students are supposed to learn. With this structuring type, RBT has been revised in two important aspects. Researchers named the table "classification (taxonomy, specification) table" which shows the relation between these two aspects and which includes the objectives. The knowledge types on the vertical aspect of the table of classification (specification) consist of four categories, which are: factual, conceptual procedural and metacognitive. This aspect of the taxonomy stands for what is/are supposed to be learnt during the teaching process. The knowledge aspect covers the pre-learning of students and the knowledge acquired during cognitive and metacognitive

activities. Researchers stated that due to the large coverage of knowledge, they had difficulty in determining the boundaries of knowledge while classifying it according to its types. They emphasized the difficulty in classifying knowledge in a certain category especially due to the use of a great number of various terms in a certain subject area and lack of consensus on the dimensions of knowledge aspects. Similarly, they emphasized the difficulty in determining the accurate boundaries of a knowledge type in a certain classification. However, in spite of these difficulties, in RBT, students' learning has been classified under four knowledge aspects (types) according to the type of knowledge (Anderson et al. 2002, p. 27-p. 30).

In the horizontal aspect of the table, cognitive processes are divided into six categories, which are: remembering, understanding, applying, analyzing, evaluating and creating. With this table, it is aimed to assist teachers during the checking process of the realization of goals. In this way, teachers can play an active role in the curriculum design by means of the table of classification (specification). Hence, the teacher is expected to make use of the revised taxonomy both in using the applied curriculum and in designing a new curriculum. RBT is aimed to guide teachers in understanding, planning and evaluating the curriculum as well as doing transfers in relation to teaching quality (Anderson et al., 2001). Anderson et al., focused on improving the students' abilities to learn knowledge permanently and transfer it. Here with the expression permanently the ability to remember the previous knowledge is emphasized and the past aspect of learning process is stressed. In transfer, on the other hand, the future aspect of learning process is stressed as it involves the abilities to remember, interpret and use the previously learnt knowledge. The character of permanent learning and transferring the knowledge is related to three important learning outcomes. The first one refers to lack of learning, where there is no learning outcome; the second to the learning outcomes which involve knowledge learnt merely by memorizing and the third one to the learning process which is based on understanding the outcomes through meaningful and understood learning. What counts here is how the learning outcomes that occurred or not occurred in the end of the learning process are (Anderson et al., 2001, p. 63-p. 65).

Bloom (1979) considers the classification and evaluation of education goals as the main elements of a curriculum development. Based on these characteristics mentioned here, Bloom (1956, p. 25) and Tyler (1949) seek answer to the following four main questions in the curriculum development process:

1. Which education aims or goals do the schools or courses aim to reach?

2. What kind of learning experiences should be created in order to reach the desired goals?

3. How efficiently should the learning experiences be organized so that they will be helpful during the continuing education process, and they will be presented to students in an order and the new knowledge will be united with students' existing knowledge?

4. How should the efficiency of learning experiences be evaluated by using tests and other assessment tools? (Narrated by Bloom, 1956, p. 25).

Based on these questions, it can be concluded that the curriculum consists of goals, content, learning/teaching process (activities) and measurement and assessment processes. A goal is the concrete or abstract outcome that is expected to come about in a systematical knowledge or experience acquisition process within a plan in order to reach pre-designed desires or needs by means of learning experiences such as knowledge, ability and experience. In this stage of curriculum design, Bloom (1956) and Tyler (1949) suggest that schools or courses focus on the question of: "Which education goals or aims are expected to be reached?" since this question is one of the first stages of the curriculum and emphasizes the element effective in the rest of the stages of the curriculum. According to Tyler (1949), the aim of education is to create a desired change in the behavior of the individual. To put it more clearly, the aim is to reflect the changes in the emotions and ideas to behavior by means of education. Bloom et al. (1956), on the other hand, define the education goals as the desired changes in students' emotions, ideas and behaviors as a result of the learning experiences given to students during education process. Attaching importance to the classification of educational goals, Bloom et al. (1956, p. 26) classify the goals based on students' learning domains as cognitive, affective and psychomotor. Anderson et al. (2001), on the other hand, divide the goals into three groups as general goals, educational goals and teaching goals according to coverage, time, and function and usage aspects.

According to Tyler, education needs are basic knowledge, attitudes and skills that are given to students by means of educational goals. These needs help students learn knowledge more efficiently (Tyler, 1949). According to Bloom (1956) and Tyler (1949) curriculum development applications should be based on this question: "What kind of learning experiences should be created in order to reach the desired goals?" Prescott, Muray et. al. state that the content or the syllabus, one of the beginning stages and important elements of the curriculum development process, is a system that enables the balance between the intrinsic energy produced by the human, a mobile organism, and the external situations (Narrator: Tyler, 1949). Although the concept "content" is frequently used in education resources, we often do not encounter its definition (Anderson et al., 2001). Anderson et al. specified "content" as "subject area" and defined it as the "common knowledge that is historically shared". Researchers explain the reason why they used the term "knowledge" or "accumulation of knowledge" instead of content or subject area as follows: First of all, with the definition "historically shared knowledge", the constant changing and developing characteristics of knowledge is emphasized. Secondly, they preferred the concept "knowledge" since the content of subject area in an academic discipline is frequently confused with course materials, courses and multimedia environments which are the "packaged subject area" to transfer the former content. Besides, by using knowledge instead of content, they aimed to prevent confusing knowledge with curriculum materials (Anderson et al., 2001, p. 12-p.13). Bloom defines the teaching process, and the application of the designed curriculum, as teaching services. According to Bloom, teaching services should be oriented to eliminate the deficiencies and inadequacies in the teaching practices. Moreover, while rendering teaching services, necessary revisions should be made on the learning units and the entry behaviors of students should properly be included in the process. Therefore, no matter how good and qualified a teaching service is to teach a

certain subject, learning (mastery learning) will not be realized in the desired level if the student lacks the cognitive entry behaviors necessary to learn the given subject (Bloom, 1976). In the assessment process, the final stage of curriculum development, conclusions about the efficiency and functionality of the designed curriculum are made. In this stage of curriculum development, an answer should be sought to the question: "How should the efficiency of learning experiences be evaluated by using tests and other assessment tools?" (Bloom, 1956, p. 25; Tyler, 1949). According to Bloom, assessment must reach a conclusion by stating ideas, goals and values about studies conducted, solutions, methods, materials, etc. (1956). According to Anderson et al., assessment in education is the evidence that specifies to what extent the students' learning consists of the specified goals. This definition suggests that assessment is done with two purposes: The first one is the formative assessment which is done in order to monitor the students' learning states. Formative assessment is done during the term in order to monitor the students' learning states. The second one is the summative assessment which is done in the end of the term to "summarize or sum up" the level of learning realized during a single term.

In this section, we include some of the studies on the use of taxonomy in giving Turkish education. In the thesis, Ungan (2007) studied the critical thinking skills of students in the writing classes by means of BT. The short stories written by students were categorized according to BT. The sub and meta cognitive levels of the sentences in the stories were specified. In addition, it was found that the rate in analysis and synthesis steps was high. Güftâ and Zorbaz (2008) studied the levels of questions in Turkish courses according to BT classification by Pearson and Johnson (for reading comprehension questions). 96 exam questions provided by Turkish teachers were analyzed. The results of the study showed that reading comprehension questions had the following distribution according to BT's cognitive categories: Knowledge (63.00%) and comprehension (25.00%). Grammar questions were mainly on application (60.00%) and analysis (21.00%) levels. Written explanation questions were on comprehension (46.00%) and synthesis (53.00%) levels. Durukan (2009) conducted a study in order to determine according to which levels of BT mostly the reading comprehension questions for texts in Turkish course materials were prepared. Durukan examined the 7th grade course materials to that end. 350 questions were analyzed according to Bloom's levels. The classification revealed that a great number of questions that aimed high level thinking skills, and reading comprehension questions mostly covered knowledge and comprehension levels, and no questions for applying level existed. In another study, the reflective thinking skill, a metacognitive level skill, was studied according to the taxonomy (Ersözoğlu & Kazu, 2011). In that study, certain activities were included to increase students' awareness about thinking and learning processes and to help them identify their strengths and weaknesses during the process and to improve the mentioned weaknesses, if any. The study was conducted in accordance with pretest – posttest control group design and keeping journals and questioning strategies were used. The results of the study revealed that activities to improve reflective thinking did not create a difference between control and experiment groups on knowledge level; and that they created a significant difference on comprehension, application and analysis levels. Eyüp (2012) studied the questions prepared for different literary text genres by undergraduate students of Turkish teaching according to RBT. Students formed

questions about three texts in different genres. The results of the study showed that 34.00% of students on remembering level, 45.00% of students on understanding level, 3.00% of students on applying level, 1.00% of students on analyzing level, 10.00% of students on evaluation level and 4.00% of students on creating level. On knowledge aspect, it was found that the questions were mostly based on factual and conceptual knowledge. Keray (2012) studied 8th graders to find out on which level they realized some of the objectives in Elementary School Turkish Course (6, 7, 8th graders) curriculum according to RBT's cognitive levels. The study included a control group and four conversation texts and questions prepared for each text in accordance with RBT were given to experiment group in four-week education process. Data showed that there was no difference between the control group and experiment group in the pretest results; on the other hand, there was a significant difference in the posttest to the advantage of the experiment group. Eroğlu (2013) evaluated the grammar questions in Turkish Course Student's Work Book for 6, 7, 8th graders and the grammar objectives in Teacher's Book according to RBT and determined on which level of the cognitive domain they stood. It was found that 60.00% of the grammar questions were on "remembering, understanding" level; 40.00% were on "applying" level. Besides, it was found that 55.00% of grammar objectives were on "remembering, understanding" level and 45.00% were on "applying" level. Altındağ and Demirel (2013) conducted an experimental study in order to examine the effect of RBT on students' achievements in the "Verbal Expression" unit of the Language and Expression course. They applied the achievement test prepared in accordance with RBT to two groups. The results of the study showed that in the learning process organized according to RBT, there was a significant difference to the advantage of the experiment group. It was also found that RBT increased the quality of the learning environment; assisted in defining the boundaries of the learning unit and designing which goals to be reached; and could be referred to find out on which level the assessment should be done to reach the goals. Tüzel, Yılmaz and Bal (2013) studied the questions prepared by fifty-two undergraduate students in the Department of Turkish Education according to RBT. The results of the study showed that the questions prepared by the undergraduate students were on remembering and understanding levels of the taxonomy. However, the questions in the poetry review part were on analysis and evaluation levels. In another study in which RBT was used in the Turkish course, it was studied how the questions under the texts affected the cognitive levels of remembering and understanding in the taxonomy (Sarar Kuzu, 2013). The results of the study revealed that surface structure questions were in parallel with remembering in RBT, and deep structure questions were in parallel with understanding level. It was also found that the rate of the questions was 36.00% on remembering level, 39.00% on understanding level, and 25.00% on other levels. Eroğlu and Sarar Kuzu (2014) studied the distribution rate of grammar objectives in Teacher's Book for 6, 7 and 8th graders for Turkish Course and the grammar questions in Student's Work book according to cognitive levels of RBT. The results showed that 60.00% of grammar questions were on remembering and understanding levels; and 41.00% were on applying level. 55.00% of grammar objectives were on remembering and understanding levels and 45.00% were on applying level. Çintaş (2015) classified the questions in Turkish courses

according to RBT. The study used document analysis and it was found that the questions were mostly on conceptual knowledge and understanding levels.

In a thesis, Avşar (2017) classified the objectives used in 2006 and 2015 Turkish course curriculum according to RBT and specified on which levels of the taxonomy they concentrated. The results of the study showed that most of the objectives in the curriculum focused on applying level. It was also found that creating level was not prevalent except writing skills. Therefore, it was concluded that high level cognitive domains were not sufficiently included in the objectives. In their study, Beyreli and Sönmez (2017) determined the subject areas that BT and RBT studies focused on in Turkey. In the study, the mostly handled aspects of BT and RBT were stated and attention was required for other aspects that should be studied.

METHOD

The present study was conducted in the scope of elementary Turkish course (5, 6, 7 and 8th graders). A curriculum for 5, 6, 7 and 8th graders was prepared. With the approval of relevant authorities, application process was conducted on one class level. The research process consisted of two main parts. The first part of the study covered the preparation of the curriculum design (theoretical) and the second part covered the application of a part of the prepared curriculum (experimental). In the second part, the explanatory sequential design was used and the usage rates of qualitative and quantitative methods were close to one another in that mixed design (Creswell & Clark, 2015, p. 4). The applied part of the curriculum prepared was designed in accordance with the "experimental design" with pretest – posttest control group (Borg & Gall, 1989; Hovardaoğlu, 2000; Kerlinger, 1973). In this part, "action research" method was also used. In the action research process, the practitioner takes part in the study process as a researcher in defining problem, data collection, data analysis, defining action plan, developing action and deciding on alternative or new action stages (Yıldırım & Şimşek, 2013, p.335-p.345).

Study Group

Students from 6A, 6D and 6C classes in a state school in Istanbul participated in the present study. Before proceeding the real application, a pilot application of two weeks was conducted with 28 students in total (15 female, 13 male) from the class 6D. At the end of the pilot application, possible problem situations that could arise during application process were detected and revisions thereof were made. Then, the real application process that would last for four months started. In the real application, 29 students (15 female, 14 male) from 6C were selected for the experiment group. Before the application, necessary data about the age and gender; achievement, socio-economic status, etc. about students were collected. According to these characteristics, students from class 6A were found to be closest to experiment group and thus were designated as the control group.

Data Collection Tools and Analysis Methods

During the data collection process, different measurement tools from different and multiple populations were used. The data of the study were collected through the

following data collection tools: Follow-up (achievement) tests and grading keys; portfolios and grading keys; pretest-posttests, achievement test with control and experiment groups; holistic gradual grading key; semi-structured open-ended survey for students; open-ended teacher interview survey and structured interview survey for teachers. Quantitative data collected through these tools were examined according to content, rate and frequency analyses. Different scorers were attacked to ensure scoring reliability between scorers. Qualitative data were examined according to item and test difficulty index, paired samples t-test, independent samples t-test and one-sample Shapiro-Wilk test.

The Validity and Reliability of the Study

An expert's opinion was asked for during the design of the curriculum draft. In this scope, Prof. Dr. W. Anderson was consulted in order to determine the suitability of RBT to the draft curriculum. The draft was revised in line with his recommendations. Then, the curriculum draft was submitted for curriculum development experts' reviews. Following the evaluation by the experts group consisting of academics from a state university in Istanbul (curriculum development branch), the deficiencies in the curriculum were eliminated. In order to ensure the validity and reliability during the application of the curriculum, different applications were included according to the stages of the study. Following the interview with the school administration, the following data were found about the school and sample group: Based on the success in TEOG (a nation-wide exam for being admitted to high school) exam, the school's success level is intermediate compared to the general success level in Turkey. Demographic characteristics (economic, social, cultural, education, etc.) of students were close to one another and these characteristics are also somewhere in the middle compared to average in Turkey. These data showed that the school was suitable for the aim of the study. Before the application, necessary information about students such as age, gender, and achievement level, social and economic status was gathered. According to these characteristics, students from class 6A were found to be closest to experiment group and thus were designated as the control group.

In the application process, the unit tests and portfolios used to assess the students' achievements were reviewed by three different graders and evaluated by different graders (Turkish teachers) according to the grader key prepared in accordance with the follow-up tests. In addition, the pretest–posttest achievement test developed was submitted for an expert's reviews. Following that, it was applied to a different group and the item and test difficulty and item discrimination analyses were done. In order to determine whether the achievement rates between control and experiment groups were significant or not, SPSS's relation analyses were used. Before proceeding with significance test, one-sample Kolmogorov-Smirnov and Shapiro-Wilk tests were done in order to examine the distribution normality of the group scores. Following that, the significance between the groups was examined according to paired samples t-test and independent samples t-test results.

Structured open ended survey was used in order to determine the metacognitive and affective reactions of students in the experiment group to teaching process (positive,

negative and unrelated). The open ended survey with eight items was submitted to two academics from the Department of Turkish Education, four academics from the Department of Educational Sciences and two Turkish teachers for their review. Following the experts' reviews, it was found that two items in the survey were not exactly fit-for-the purpose of the study and were quite similar to other items. Therefore, those items were omitted from the survey and the six-item survey was completed prior to the application. Besides, the open ended concentrated interview survey was used in order to receive the comments of the teacher taking part in the application in the experiment group about the application. The draft of the interview consisting of focal topics was submitted to academics from the Department of Turkish Education and two academics from the Department of Educational Sciences for their comments. Following the experts' reviews, the draft interview was finalized and applied. The structured survey was used for Turkish teachers' comments on the "Elementary School Turkish Course Curriculum Designed in accordance with the Revised Bloom's Taxonomy". Following experts' reviews, some parts and items were considered to be irrelevant and not fit-for-the purpose and too similar to other items. Those items were omitted and the survey was finalized. Then a pilot application was done together with three Turkish teachers and the items of the scale were reviewed. The six-category and Four-Likert survey titled "The Review of the Turkish Course Curriculum Designed in accordance with the Revised Bloom's Taxonomy through Teachers' Comments" was finalized for real application.

FINDINGS

Findings and Results on the Design Process of the Elementary School Turkish Course Curriculum Designed in accordance with the Revised Bloom's Taxonomy

General Aims of the Designed Curriculum

The general aims of the curriculum designed in accordance with the Revised Bloom's Taxonomy were determined in accordance with the education policies and priorities specified by the Ministry of National Education (the general aims of basic education are to raise happy and healthy individuals who are ready for life, embrace the national, spiritual and universal values; are both academically and socially successful; can adapt to technological developments; and have respect for themselves, for the society and for other cultures with a high level of awareness). The general aim of the curriculum designed in accordance with these priorities is to enable students to internalize knowledge and apply it easily. In order to help them internalize knowledge, the curriculum motivates them to look for ways to reach knowledge in cognitive and affective ways and help them know themselves based on these skills. In the curriculum design, it is aimed that students will be able to use their verbal communication (listening/following, speaking), reading and writing skills and grammar competences in all areas of life in accordance with their cognitive, affective and metacognitive language developments. Students using their language skills in accordance with their needs in an efficient and sufficient way based on these competences are expected to improve themselves on individual and social level and meet their needs in this scope. During the needs assessment process of the curriculum designed in accordance with the General

Aims and Basic Principles of Turkish National Education stipulated in the Fundamental Law of National Education of 1739, the needs of the individual and the society was tried to be assessed. To that end, the elements that should be included in the Turkish Course curriculum were focused on. The needs assessed in accordance with RBT were compared to needs criteria stated in the Notification for Turkish Framework for Competence (issued in the Official Gazette of 29581 dated 2/1/2016) and its enclosure Turkish Framework for Competence and European Framework for Competence. The results of the comparison revealed that the specified competences were compatible with the aims stated above.

Assessment of Needs and Justifications for the Designed Curriculum: According to the needs assessment research conducted for a RBT-oriented curriculum, the reasons for such a need are found to be as follows:

•The results of the research showed that the taxonomies are not used as a model in curriculum development studies (Sönmez, 2017). The fact that this resource, which has served as the base for the classification of educational goals worldwide for nearly seventy years, has not been referred to especially in Turkey during the design and development process of a curriculum made this study necessary.

•The fact that objectives and activities cannot complement one another at the end of the teaching process in the Turkish course curriculum could give rise to serious problems in the application of the curriculum. In other words, the lack of a sound relation between the content, goals and objectives and the learning process inevitably results in poor realization of objectives and missing the targeted outcomes. Therefore, a curriculum that will eliminate this problem is required. It is thought that in the case of using the sound structure between the taxonomy's cognitive categories and sub-cognitive processes in a curriculum design process shall put an end to this problem.

•Another reason for the need for this curriculum draft is to eliminate the problem of not being able to render the objectives, knowledge and skills together and in a systematic way. Defining what to teach and how to organize the process is a complicated part of designing curriculum and the lack of methods to sort out this part is another problem. It is foreseen that in the event of using the taxonomy's noun-verb structure (combination) efficiently and functionally, this need shall be met.

•The lack of necessary and balanced distribution rates of the achievements for students' cognitive, affective and metacognitive development in the Turkish course curriculum is another reason that makes the present study necessary. The fact that objectives for affective and metacognitive development domains are not sufficiently covered in the curriculum deems the present study necessary.

•In the previous needs assessment, the insufficient coverage of some development domains in the Turkish course curriculum has been emphasized. In the needs assessment conducted, it was found that the objectives for the cognitive domain cover a larger area compared to other development domains. The lack of a balanced distribution between domains deems the present study necessary. The result of the review suggests that RBT bears a suitable structure for three domains (cognitive, affective and metacognitive). It is

thought that this need shall be met in the event that this structure is efficiently used in the curriculum design process.

• It is observed that a great number of models, methods, techniques and measurement tools are compatible with the structure of the taxonomies. When the studies conducted in this regard are considered, it is understood that a great number of methods, techniques and measurement tools have been developed based on BT and RBT (Sönmez, 2017). In the present curriculum designed in accordance with this advantage of the taxonomies, the convenience to prepare and use methods, techniques and measurement tools is provided. This suggests that a sound relation and compatibility can be ensured between the designed curriculum and the education-teaching process, which will provide convenience in the application of the program.

The Approach of the Curriculum: The approach of the "Elementary School Turkish Course Curriculum Designed in accordance with the Revised Bloom's Taxonomy" is to enable each and every individual involved in the education-teaching process to attain mastery learning based on their needs and according to suitable and sufficient education elements such as technology, time, material, knowledge, skills, etc. The curriculum designed based on this idea, learning process focuses on "individual learning" that covers all students and takes suitability for students within this scope into consideration. Therefore, in the curriculum design, a teaching approach that directs students to use their cognitive, affective, metacognitive and social language development skills more efficiently in accordance with their individual learning needs is at the forefront. Based on this approach, content of the activities has been created through the adaptation of mastery learning, problem based learning, collaboration based learning, active learning and multiple intelligence models into the Revised Bloom's Taxonomy's knowledge types and sub-cognitive processes.

Basic Skills in the Curriculum

The skills in the designed curriculum are divided into three important areas as reading, writing and verbal communication by taking the relation between these areas and the characteristics of them into account. Grammar subjects were handled in the body of reading, writing and verbal communication skills with the purpose of presenting the knowledge about the structure and the rules of the language; enabling the correct and efficient use of the language and raising awareness among students about the academic aspect of the language. In line with these objectives, content about the grammar has not been included as a different skills area in the designed curriculum as they complement students' linguistic competences. In the curriculum design, grammar subjects have been presented hand in hand with writing, reading and verbal communication skills depending on the skills they are related to.

Listening, following and speaking skills are presented together depending on the affective domain and RBT's structure. During the organization of objectives and activities, first, we tried to design the listening, following and speaking skills were designed independent from one another. However, the review of the design showed that these skills could not render some of the cognitive categories of the RBT. For instance, an objective and a suitable activity for that objective in the analyzing and creating categories

could not be organized. Another example showed that knowledge types and the six cognitive categories in RBT completely covered a certain skill area (speaking), but partly covered another (following and listening). Preparing the suitable measurement tool to test these skills were difficult due to these drawbacks. These skills could not be completely measured and assessed due to the fact that suitable measurement tools had not been created. Another difficulty encountered during this process was that content modules suitable for listening, following and speaking skills in accordance with RBT's knowledge areas could not be created.

Following these results, organizing these three skills together were tried to be worked on. The review of the design showed that the design including listening, following and speaking skills all in one was in accordance with both knowledge and cognitive categories of RBT. For instance, while some objectives and activities are compatible with listening, and following skills in the remembering, understanding and applying stages depending on the type of knowledge, these objectives and activities are compatible with speaking skills in evaluating and creating stages. Hence, the continuity of the skills (the case of giving them in six cognitive categories) is linked to the knowledge type and affective domain they are related to. Therefore, listening, following and speaking skills have been rendered together in the draft curriculum depending on the compatibility and relation between the affective domain, knowledge type and cognitive categories. In addition, these skills have been united under the title of verbal communication skills as they support and complement one another during verbal communication process. So, the content to be taught in the curriculum has been organized in accordance with the three skills areas in a way that they will cover reading, writing and verbal communication skills.

Values Education in the Curriculum

In the designed curriculum, not all values are included, only some values are touched upon. The reason for not including all values or for including a certain number of values in the curriculum is related to a specified characteristic of values education. Since values education cover interdisciplinary subjects, it should be given by taking the content characteristics of other courses into account. Some values are shared in some courses such as Religions and Morals, Turkish, Social Sciences, Music, etc. in which verbal skills are prominent. Therefore, this point should be taken into consideration. Overlapping of subjects related to values education should be prevented in courses with prominent verbal skills and values teaching should be given in the scope of courses which a certain value is closely related to; when these points are taken care of, it is assumed that values education will be more efficient and standardized. Hence, in line with the structure of disciplines curriculum development approach, values education should be based on a common curriculum. The scope and limits of the curriculum for values education to be designed should be predominantly specified with the coordination of experts (universities and schools) in courses in which verbal knowledge are delivered. In this way, it will be possible to designate which values should be given in which grade and in the scope of which course and which subject area. Measurement and assessment processes should be followed up according to these courses and the achievement level of values should be specified. Based on this conclusion about values

education, in the designed curriculum some values and basic emotions through sample texts were included. These values have been rendered in the scope of reading, writing and verbal communication skills based on the content.

Measurement and Assessment Approach in the Curriculum

During and after the application process of the designed curriculum, five different achievement tests (one placement and four formative) were applied in order to determine the attainability of goals and objectives and to review and assess students' achievements. For the purpose of a more efficient quantitative assessment process, an internal and external assessment was done and interwoven structure of the placement and formative assessments were made used. During the curriculum design process, curriculum design was examined and reviewed in accordance with the following criteria and standards:

•Method examination, achievement of organizing the content in accordance with modular and spiral content

•Subject examination, identification of ignored or omitted subjects

•Content examination, identification of deficiencies or redundancies in the content

•Overlapping examination, identification of the rate of rendering the target knowledge by classes

•Principle examination; determining the compatibility of the designed content with the learning principles of validity and reliability; scientific nature, being suitable to students' interests and needs, usefulness, learnability and social realities

•Measurement and assessment examination, reviewing and detecting the compatibility of content with the measurement tool development, usage and assessment processes.

Application of the "Elementary School Turkish Course Curriculum Designed in accordance with the Revised Bloom's Taxonomy"

The scope of this section deals with the preparation process of the content, goals-objectives and activities in the designed curriculum and thereby aims to assist teachers to learn how to use them. Although it is aimed to explain how to use the curriculum as the structure of the curriculum deems it necessary, we highly recommend teachers to know the purpose and function of RBT, BT and Bloom's affective classification. It is believed that teachers who know the purpose, structure and function of RBT will easily grasp and apply the present curriculum design. The content, objective and activity aspects of the present curriculum designed in accordance with RBT are explained and exemplified in detail below.

Structure of the Content

The content subjects were collected in four different content pools by knowledge types in the factual, conceptual, procedural and metacognitive domains in RBT based on the modular content curriculum approach. Next, those knowledge types were related to reading, writing and verbal communication skills. In this way it was ensured that for each of the reading, writing and verbal communication domains, four different

knowledge modules (four different content pools) were created which were factual, conceptual, procedural and metacognitive. Content subjects related to metacognitive knowledge were organized in relation to affective domain steps.

The distribution of the content created by classes was studied. In this process, subjects related to grammar, writing, reading and verbal communication skills that had priority and were to be repeated were organized based on spiral content curriculum approach. This spirality was not designed based on the repetition of the target knowledge in all classes as it was, but as follows based on the increase of knowledge load in upper grades: A certain subject is not to be repeated as it is in upper grades; it is delivered in line with the knowledge in the subtitle of another subject it is related to and with an increase in the knowledge load. In order to ensure a balanced rendering of knowledge loads in objectives based on skills and to avoid a high load of knowledge in skill objectives, the spiral knowledge is sometimes rendered in activities when necessary. In this way, that spiral knowledge in relation with skills has been transferred into the application process of the relevant skill. In other words, while being repeated in upper grades, a certain subject is given in relation with another subject in the objectives or together with activities. Besides, knowledge loads of spiral knowledge are organized such that the load will increase in upper grades. This spirality is rendered in groups in RBT's knowledge types (factual, conceptual, procedural and metacognitive). With this organization, the content of the designed curriculum has been designed with an organization method based on the intersection of the spiral and modular content curriculum approaches.

Hence, in line with the modular content curriculum approach, the spiral subjects have been created in a way that they are divided into factual, conceptual, procedural and metacognitive knowledge domains in accordance with the knowledge type they are related to. For instance, "subject, main theme, theme", the spiral subjects of reading skills, are given together with the other subjects of factual and conceptual knowledge based on their characteristics [Words and word groups supporting the subject and main theme (5th grade), idioms and proverbs supporting the subject and main theme (6th grade), the efficiency of the visuals in the text in transferring the main theme and subject (7th grade), finding the subject and main theme of the poem based on the figures of speech in the poem they read (8th grade)].

In upper grades, spiral subjects that cannot be given in the objectives are given based on the knowledge type they are related to in the course activities in which the content is applied. For instance, the procedural aspect of the knowledge of "descriptive text" is prominent in the course activities in upper grades; it is not emphasized as an objective in the objective activities in which knowledge about adjectives and nouns is rendered. In this way, the spirality of the designed curriculum with the activities were tried to be continued. By means of these methods, the distortion of the modular structure was aimed to be avoided and the relevant content in an appropriate context was rendered, thus to ensure a more systematical rendering of the content in the designed curriculum. The structure used in the organization of the content is given in Figure 1.

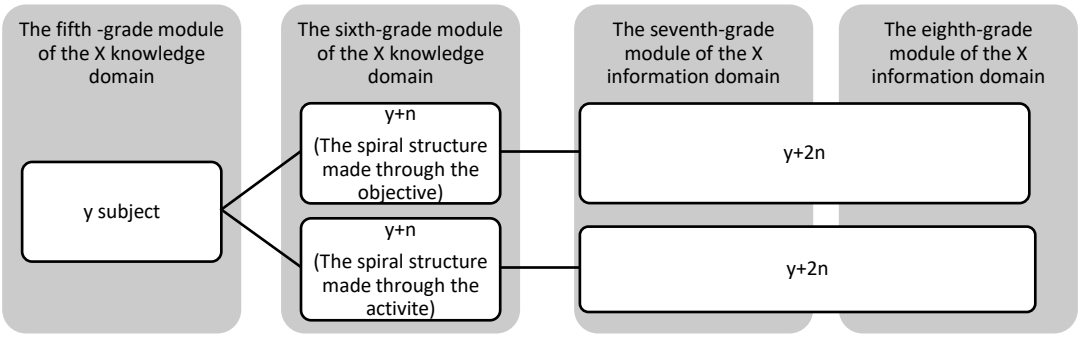


Figure 1. The arrangement of the content topics in the curriculum draft according to the modular and spiral approach.

Structure of the Objectives

This section deals with the design and organization of the goals and objectives. Goals and objectives were written in accordance with the knowledge type they are related to. Each knowledge domain in RBT (factual, conceptual, procedural and metacognitive) was organized such that it would cover a goal in the designed curriculum. Hence, the aim of the goal is to realize the knowledge domain in the skills area it belongs to. With this in mind, for each skill area (reading, writing, verbal communication), four goals involving factual, conceptual, procedural and metacognitive knowledge were written. For instance, for the verbal communication skill area for the 6th grade, the following goals were written in accordance with the knowledge types; factual, conceptual, procedural and metacognitive respectively:

Goal 1: Learning the concepts and terms related to verbal communication.

Goal 2: Learning the elements of verbal communication process.

Goal 3: Learning the methods and techniques related to verbal communication process.

Goal 4: Learning how to create verbal communication that will address their interests, attitudes and values and will support individual learning awareness.

Based on the knowledge types and skills area, twelve goals were written for each grade. The knowledge limit of the goal was given such that it would cover the objective, content and activities, which contain more detailed knowledge. Next, objectives were written in accordance with the goals. Here, first the limits of the objectives were specified in accordance with the goals in four knowledge types in each skills area. Then these objectives were organized in accordance with the six cognitive domains in RBT. In this way, the objectives were written in accordance with the remembering, understanding, applying, analyzing, evaluating and creating categories in RBT. Therefore, approximately six objectives were written for each goal in the designed curriculum. The reason for using the word "approximately" here is that this number given for the objectives changes according to the skills area and content. One objective for each cognitive category while organizing the objectives was tried to be written. However, for subjects in which knowledge load was high, more than one objective was written.

Objective sentences consist of two parts based on RBT's noun-verb structure (combination). The noun clause part preceding the verb forms the content of the objective (knowledge, skills, and attitudes to be learnt) and the verb part was written in accordance with the cognitive categories of remembering, understanding, applying, analyzing, evaluating and creating and were written in bold in the objective sentence. Based on this structure, the question of "What will the student learn?" will be directed to noun, whereas the question of "How will the student learn?" will be directed to the verb. The structure of the objectives is given in Figure 2.

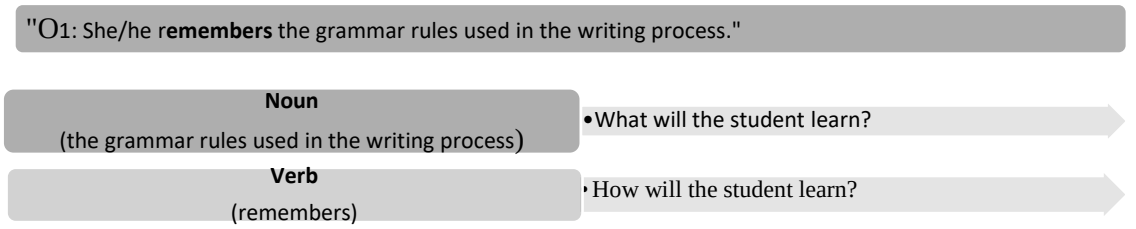


Figure 2. The structure of the sentence prepared according to the name-verb structure of RBT.

While organizing the objectives, four knowledge types and three skills area were used in order that the students will use all of the cognitive processes of remembering, understanding, applying, analyzing, evaluating and creating. Hence, for reading, writing and verbal communication skills areas, objectives in remembering, understanding, applying, analyzing, evaluating and creating categories were created in accordance with factual, conceptual, procedural and metacognitive knowledge aspects respectively. The objectives written were indicated in the appropriate places in the RBT table. In this way, the objectives of the designed curriculum were given in compliance with the structure in the RBT table. The objectives created in the designed curriculum were indicated as "O1", "O2", "O3", "O4", "O5" and "O6" respectively. Here the letter "O" indicates objective, and the number following it indicates both the cognitive category and the sequence of the objective. Since this is a student-centered curriculum design, objective statements were expressed as a student practice. For instance, for the 6th grade, in order to realize the first goal (factual knowledge type) of the writing skills area, the following objectives were written in accordance with remembering, understanding, applying, analyzing, evaluating and creating categories respectively:

O1: Remembers the elements of grammar (inflectional morphemes) in the writing process.

O2: Interprets the grammar elements used in the writing process.

O3: Applies the grammar rules in the writing process.

O4: Examines the writing draft he/she has written in accordance with the grammar rules.

O5: Evaluates a sample text in accordance with grammar rules.

O6: Creates an original text by using the grammar rules correctly and efficiently in the writing process.

Structure of the Activities

In order to avoid a gap between goals/objectives and activities, sub-cognitive processes of the taxonomy were referred to. In other words, in order to prevent confusion between activities and goals/objectives and to avoid gaps between them, the sub-cognitive processes in the six cognitive categories of the taxonomy were utilized. In this stage, first of all activities suitable for the nineteen sub-cognitive processes of the six cognitive categories of the taxonomy were specified. In this way, the activities created in order to realize the objectives written in accordance with the cognitive categories of remembering, understanding, applying, analyzing, evaluating and creating were designed in an order in accordance with the sub-cognitive processes of these categories. Hence, the activity for the goals and objectives in each cognitive category was created in accordance with the sub-cognitive processes of a certain category. By means of this structural method, the sub-cognitive processes of RBT to see was used and students' performances were assessed and cognitive categories of RBT was used to see and assess the goals and objectives. The advantage of this method is that, while applying the activities, it guides and assists teachers to know in which stage of the cognitive process they are, which objective they are dealing with, to what extent the objective is handled and what they are going to handle after that.

Another important point taken into consideration while adapting the activities to cognitive processes is the structure of knowledge, i.e., the characteristic of content. Hence, the most suitable sub-cognitive processes for methods, techniques and content used to realize the objective more efficiently in the activities were tried to be chosen. In this way, we aimed to prevent the repetition of similar course activities and thereby prevent boredom and loss of motivation in students during the learning process.

While designing activities appropriate for goals and objectives, all the cognitive categories and sub-cognitive processes in RBT to support the activity were tried to be used. The aim of including this large framework in the activity process is to ensure the preparation of learning processes which are suitable for and sensitive to individual differences. Hence, the activities in a way that they will provide positive learning conditions for all individuals whose abilities to receive knowledge (to learn) are different from one another were tried to be created. Another reason for including this large framework during the activity design process is the differences between the schools in terms of availability of education technologies and tools and the use of them; the characteristics of the learning environment, authentic learning situations in the classrooms, supplementary course materials, measurement and assessment tools and processes, etc. Bearing all these factors effective in the education-teaching process in mind, the designed curriculum suitable and available for every school environment was aimed to be made. Depending on these factors and in order to ensure mastery learning, we tried to design a learning process (activities) in accordance with all cognitive categories and sub-cognitive categories in RBT.

Although activities and objectives were designed in accordance with all cognitive categories in the designed curriculum, to what extent they will be applied depends on teacher's monitoring the learning process in the classroom. Hence, it is important for the

teacher to know the authentic learning situation in the classroom and to closely monitor all students in the learning process. For instance, in a classroom where learning pace and achievement average are high, the teacher is supposed to complete the lesson with a small number of activities with suitable cognitive processes in order to avoid loss of motivation and boredom in the learning process. However, in a classroom where learning pace and achievement average are low, the teacher is supposed to realize activities with more cognitive processes in order to ensure efficient and sufficient learning. In this way, all students' learning competences and needs based on the principle of suitability for the student were tried to be taken. The designed curriculum was tried to be given a flexible nature with this condition. With this flexible nature, the designed curriculum gives the teacher the opportunity to choose the activities suitable for the authentic learning level and according to the needs of the classroom.

The flow of the activities in the designed curriculum was given in relation to sub-cognitive processes in which the objectives are realized stage by stage. Objectives were indicated in the activities as O1a, O1b… O2a, O2b… O3a, O3b… O4a, O4b… O5a, O5b… O6a, O6b… based on the sub-cognitive process of the cognitive category they are related to. Here the letter "O" indicates the objective, the number "1" etc. following it indicates the cognitive process and objective number and the lowercase "a" etc. indicates both the sub-cognitive process and the sequence of the objective. At the end of each activity, an "Objective Check List" is given in order to check whether the objectives are realized or not or to what extent they have been realized. In this list, the teacher can assess the objectives by grading the relevant objective according to the flow of the course. What the abbreviated codes for the objectives in the activities stand for are indicated below:

O1a: Remembering category (1st objective) 1st sub-cognitive process (telling, et al.)

O2a: Understanding category (2nd objective) 1st sub-cognitive process (explaining, et al.)

O3a: Applying category (3rd objective) 1st sub-cognitive process (doing, et al.)

O4b: Analyzing category (4th objective) 2nd sub-cognitive process (organizing, et al.)

O5b: Evaluating category (5th objective) 2nd sub-cognitive process (criticizing, et al.)

O6a: Creating category (6th objective) 1st sub-cognitive process (creating, et al.)

O6b: Creating category (6th objective) 2nd sub-cognitive process (planning, et al.)

Second Part

Findings and Conclusions about the Elementary School Turkish Course Curriculum Designed in accordance with the Revised Bloom's Taxonomy

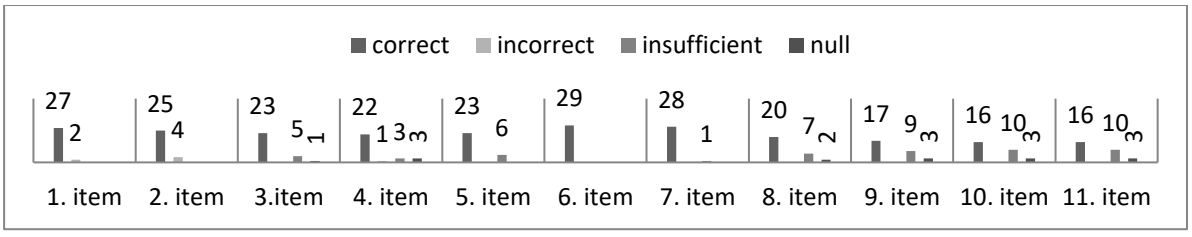
This section was designed according to four research questions. In the whole study, the first, second and third research questions deal with the findings about the application (teaching process) of the designed curriculum to the experiment group. The fourth research question, on the other hand, deals with the findings about the evaluation of the whole curriculum in accordance with experts' (Turkish teachers) comments. Due to the fact that the qualitative and quantitative findings gathered through research questions form a large volume of papers, only some of the conclusions re included here. The conclusions from the selected findings are given below in the relevant parts.

Findings About the Research Question "On Which Level is the Achievement of the Teaching Activities in the Elementary School Turkish Course Curriculum Designed in accordance with the Revised Bloom's Taxonomy (6th grade)?"

During and after the application process of the designed curriculum, five different achievement tests (one placement and four formative) were applied in order to determine the attainability of goals and objectives and to review and assess students' achievements. For the purpose of a more efficient quantitative assessment process, an internal and external assessment was made and the interwoven structure of the placement and formative assessments was used (Fitzpatrik, et al., 2004, p. 24). The items in these tests were prepared according to the cognitive categories of remembering, understanding, applying, analyzing and evaluating in RBT. The teaching process in the creating category of the taxonomy was reviewed and assessed based on students' products. To that end, portfolios (poetry, debate and fables) created by students with the knowledge related to writing, verbal communication skills and grammar competences were reviewed.

Subject (achievement) Follow-Up Test

This achievement test was designed in accordance with the activities for the first goal of "Learning the concepts and terms related to writing process" for sixth grade writing skills. An achievement test was developed according to the teaching process in the activity "Lives in My Stories" that was designed to realize the objectives related to grammar in accordance with the first goal of writing skills. The items in the achievement tests were organized according to the cognitive categories of remembering, understanding, applying, analyzing and evaluating in a way that they will realize the objectives of the factual knowledge for writing skills in the curriculum designed in accordance with RBT. The "Writing skills and grammar achievement test according to factual knowledge type for 6th grade" consisting of 11 items in total covers different item types such as open-ended questions, multiple choice, gap filling, matching and visual writing (creative writing). The items in the achievement test applied were reviewed by three different graders and the distribution of students' answers according to review results is given in Graphic 1.



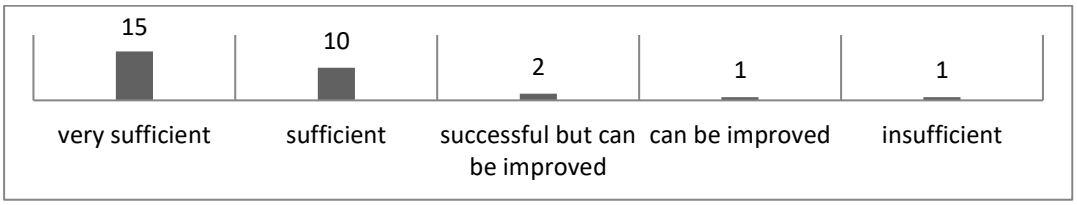
Graphic 1. The results of the grammar achievement test given according to the factual knowledge.

In this part, the results of the writing skills and grammar achievement test according to factual knowledge type generally shows a high level of achievement in the cognitive categories of remembering, understanding and applying. In the analyzing and evaluating categories, however, the achievement is in mid-level. It was observed that students had much more difficulty in the grammar subjects in this part since the rate of

achievement decreased in these categories (analyzing and evaluating). In spite of the difficulties experienced by the students, it can be concluded that the activities done in this part are efficient in a rate that is close to the target rate since general achievement rate is on average. Hence, it is observed that objectives related to analyzing and evaluating categories were realized close to the target level. The cognitive categories in the knowledge types (metacognitive writing, verbal communication skills conceptual knowledge, reading skills procedural knowledge) were realized so close and similar to one another in the first three parts. Contrary to that, a considerable difference is observed to occur in the categories in this part. In spite of this difference, it was concluded that the objectives related to remembering, understanding, applying, analyzing and evaluating categories of the taxonomy were realized in general.

Portfolio

A fable writing activity was done in order to realize the objective "O6: Creates an original and creative text by using grammar rules correctly and efficiently during writing process", which is on the creating step of "Learning the concepts and terms related to writing process" activities for the first goal of the sixth grade writing skills. In this section, the fables written by students were evaluated according to the organization of exposition, rising action and resolution parts; achievement of using the fable elements (personification of animals and making them speak); achievement of giving a message in the fable and achievement of writing the fables in accordance with grammar rules (prepositions, pronouns, particles and conjunctions). At the end of the evaluation process carried out with students, the best three fables were chosen and were exhibited on the classroom bulletin board. The fables were assessed by being graded by three different graders in accordance with the criteria in the grading key. The achievement statuses of the fables at the end of the assessment by three graders are shown in Graphic 2.



Graphic 2. Results of the product file.

When we have a look at the achievement rate of the fables written by students, we see that the number of successful texts is higher considering the criteria specified and the number of the fables written. This finding suggests that the students have learnt the knowledge about writing a text and grammar rules (prepositions, pronouns, particles, conjunctions) well and have used this knowledge. In this scope, it was identified that students wrote creative fables by means of the knowledge they had learnt. This shows that the objective for writing skills and grammar competence, first goal, creating step "O6: Creates an original and creative text by using grammar rules correctly and efficiently during writing process" has been realized successfully. The success rates of the fables at the end of the assessment are given in Table 1.

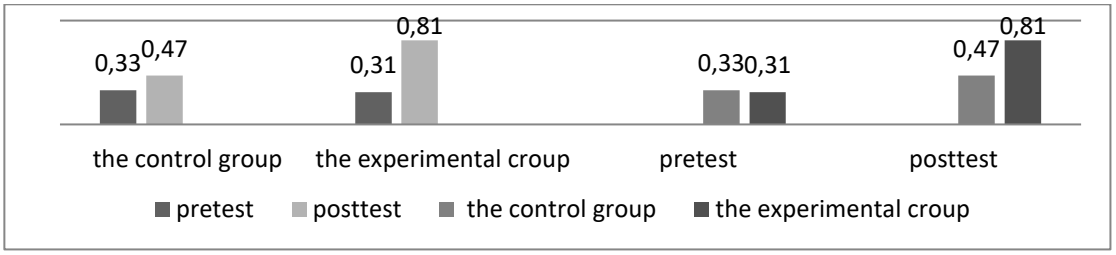
Table 1. Results about the Success Levels of the Fables in the Product File.

Story no.	Use of layouts, nodes and solution parts	Using the elements of fable (personification and talking-intact of animals)	Using the message	Use grammar topics (nouns, pronouns, prepositions, conjunctions)	Results of the products according to the criteria
1	2	2	2	2	very successful
2	2	2	2	2	very successful
3	2	2	2	2	very successful
4	2	2	2	1	successful
5	2	2	0	1	developable
6	2	2	2	2	very successful
7	2	2	2	2	very successful
8	2	2	2	2	very successful
9	2	2	2	2	very successful
10	2	2	1	2	successful
11	2	2	2	1	successful
12	2	2	2	1	successful
13	2	2	0	2	successful
14	2	2	2	2	very successful
15	2	2	2	2	very successful
16	2	2	2	2	very successful
17	2	2	2	1	successful
18	0	0	0	1	null
19	2	2	2	2	very successful
20	2	2	2	2	very successful
21	2	2	2	1	successful
22	2	2	1	1	successful but developable
23	2	2	2	2	very successful
24	2	2	2	2	very successful

25	2	2	2	1	successful
26	2	2	2	1	successful
27	1	2	1	1	successful but developable
28	2	2	2	1	successful
29	2	2	2	2	very successful

Findings about the Research Question "Do the Elementary School Turkish Course 6th Grade Teaching Activities Designed in accordance with RBT and a Part of Which Was Applied Create a Significant Difference on the Success Rates of Students According to the Pretest and Posttest Results?"

The aim of this section is to determine whether there is a significant difference between the achievement levels of students in the experiment group in which the activities of the curriculum designed in accordance with RBT and a part of which was applied were done and the achievement levels of students in the control group (6th grade) in which the activities of the official curriculum were done in Turkish course. To this end, the pretest-posttest with experiment-control groups design were used. At the end of the review, the discrimination index and difficulty of the items in the test were tried to be determined. Before applying it in the experiment and control groups, the discrimination index and difficulty of the test were determined to be of intermediate level. The frequency analyses related to the item-difficulty for both groups are given in Graphic 3 in detail.



Graphic 3. The rate of test difficulty index of pretest and posttest of experimental and control groups

The graphic shows the test difficulty indexes between the pretests and posttests in four categories of experiment and control groups. In the first category, it was identified that the test difficulty index between the pretests and posttests of the control group differentiated at the rate of .14. In the second category, an increase of 0.50 was identified between the test difficulty indexes of pretests and posttests of the experiment group. These results are quite important to identify how the difficulty in test was. Because these results show to what extent both tests were easy or difficult. This finding leads to the following conclusions: The graphic shows that posttest is easier than the pretest in the control group. The reason for this is the increase of .14 from .33 to .47 This increase in the item difficulty indexes in the control group in which the official

curriculum was applied is less than the one in the experiment group. In the experiment group, it was observed that the difference between the item difficulty indexes of pretest and posttest is higher than the one in the control group. The pretest of the experiment group shows an increase from .31 to .81. This high increase of .50 between two tests is quite important. Because this rate shows that students in the experiment group found the pretest easier at a level of .50 compared to posttest.

In order to understand better the difficulty difference between two groups, it is necessary to review the third and fourth categories where the pretests and posttests of two groups are evaluated by comparison. In the third category, the difficulty indexes of the pretests for the experiment and control group show that both groups faced a difficulty at a rate close to one another in the pretest. Although this rate of difficulty is higher in the experiment group than it is in the control group at a level of .02, it is possible to say that the difficulty indexes of the test in both groups are close to one another. In the fourth category, when we look at the difficulty indexes of posttests for the experiment and control groups, we see that both groups increased their rates in the posttests. However, the fact that the increase rates in the posttests are quite different from one another is a very important finding. Because the difference rate of .41 between the experiment and control groups in the posttest results from the high level of difficulty index in the experiment group. Hence, the experiment group answered the posttest more easily than the control group at a rate of .41. This finding suggests that while the experiment group taking the curriculum designed in accordance with RBT had more difficulty in the pretest than the control group did, this difficulty decreased at a significant level in the posttest. Therefore, the students in the experiment group answered the posttest more easily than the students in the control group did.

In order to determine whether the achievement rates between both groups were significant or not, relation analyses of SPSS were used. Before carrying out a significance test, one sample Shapiro-Wilk test was applied in order to review the normality of distribution in the group scores. Analyses in this section were done based on Shapiro-Wilk test since the data were collected from less than fifty participants. Next, the significance between the groups based on the results from paired samples t-test and independent samples t-test were examined. Findings related to the normality of distribution of scores and results of the significance test are given in detail below.

If the kurtosis and skewness values are between +1.5 and -1.5, we can mention a normality of distribution (Tabachnick & Fidell, 2013). With reference to these values, we can conclude that data from the achievement test show a normal distribution since the pretest kurtosis value of the control group is (-.60) and the skewness value is (.34); the posttest kurtosis value of the control group is (-1.03) and the skewness value is (-.31) (See Table 2).

Table 2. Results of a Shapiro-Wilk test to Control the Distribution Normality of Pretest-Posttest Points of the Control Group

						Kurtosis	Skewness
Scale	**N**	**$\bar{X}$**	**Sd**	**df**	**P**		
Pretest control group	28	9.57	3.17	28	.21	-.60	.34
Posttest control group	28	15.32	6.19	28	.20	-1.03	-.31

In addition, the result of the Shapiro-Wilk test rendered a difference in the distribution from normal distribution, which was not found significant (control pretest Shapiro-Wilk .21, p>.05 and control posttest Shapiro-Wilk .20, p>.05). In order to identify whether there was a significant difference between the pretest and posttest results of the control group which showed normal distribution, a paired sample t test was done. The results of the test are given in Table 3. As is seen in the table, the results of the paired sample t test done to identify whether there was a significant difference between the Turkish course achievement test pretest and posttest scores of the students in the control group delivered a significant difference between the arithmetic means of the groups (t= -4.46; p<.05).

Table 3. Results of the Paired Samples T-Test to Determine Whether There Is Any Difference Between the Pre-Test and Post-Test Scores of the Control Group.

					T Test		
Score	**Groups**	**N**	**$\bar{X}$**	**Sd**	T	**df**	p
Control group	Pretest	28	9.57	3.17	-4.46	27	.00
	Posttest	28	15.32	6.19			

According to Table 4, the following conclusions are derived about the kurtosis and skewness values of the scores in the experiment group: It can be suggested that data from the achievement test showed a normal distribution since the pretest kurtosis value is (-.42) and the skewness value is between (-.24); posttest kurtosis value is (.57) and skewness value is (-1.04) in the experiment group. In addition, the result of the Shapiro-Wilk test rendered a difference in the distribution from normal distribution, which was not found significant (experiment pretest Shapiro-Wilk .41 p>.05).

Table 4. Results of a Shapiro-Wilk Test to Check the Distribution Normality of Pretest-Posttest Scores of the Experimental Group.

						Kurtosis	Skewness
Scale	**N**	**$\bar{X}$**	**Sd**	**Sd**	**P**		
Experimental Group Pretest	29	8.65	3.79	29	.41	-.42	-.24
Experimental Group posttest	29	24.72	2.89	29	.00	.57	-1.04

In order to identify whether there was a significant difference between the pretest-posttest scores of the experiment group which showed normal distribution, a paired sample t test was made. The results of the test are given in Table 5. As is seen in the Table, the results of the paired sample t test done to identify whether there was a significant difference between the Turkish course achievement test pretest and posttest scores of the students in the experiment group delivered a significant difference between the arithmetic means of the groups (t=-19.93; p<.05).

Table 5. Results of the Paired Samples t- Test to Determine Whether There is Any Difference between the Pretest-Posttest Scores of the Experimental Group.

Groups					T test		
		N	**$\bar{X}$**	**Sd**	t	df	p
Experimental group	Pretest	29	8.65	3.79	-19.93	28	.00
	Posttest	29	24.72	2.89			

In the analyses so far, the normality and significance of the pretest and posttest of the control group and pretest and posttest of the experiment group were reviewed. In the following analyses, the normality and significance of the pretest results in the control and experiment groups and the posttest results in the control and experiment groups are examined. Before examining the difference between the students' achievement in the end of the pretests and posttests in the experiment and control groups, the normality of distribution of the pretest and posttest scores in the control and experiment groups according to Shapiro-Wilk test were reviewed. Next, the results of the independent samples test done to identify whether there was a significant difference between the scores of these tests were included.

According to Table 6, we can say that data from achievement test show a normal distribution since the pretest kurtosis value is (-.60) and the skewness value is (.34) in the control group; and the pretest kurtosis value is (-.31) and the skewness value is (-.21) in the experiment group. The result of the Shapiro-Wilk test rendered a difference in the distribution of the experiment and control groups' scores from normal distribution,

which was not found significant (control pretest Shapiro-Wilk .21; p>.05 and experiment pretest Shapiro-Wilk .39; p>.05).

Table 6. Results of a Shapiro-Wilk Test to Check the Distribution Normality of the Pretest Points of the Control and Experimental Group.

						Kurtosis	Skewness
Scale	**N**	**$\bar{X}$**	**Sd**	**Df**	**P**		
Pretest control group	28	9.57	3.18	28	.21	-.60	.34
Posttest control group	29	8.46	3.71	28	.39	-.31	-.21

In order to identify whether there was a significant difference between the pretest scores of experiment and control groups that showed normal distribution, an independent samples test was done. As is seen in Table 7, according to Levene's test statistics values, the variations for the total pretest scores of the experiment and control groups show homogeneity (F= .70; p= .40 > .05). The results of the independent samples test done in order to identify whether there was a significant difference between the Turkish course achievement test pretest scores of the students in the control and experiment groups did not render a significant difference between the arithmetic means of the groups (t= -.98; p= .32>.05).

Table 7. Results of Independent Group T Test to Determine Whether There Is a Difference Between Pretest of Experimental Group and Control Group Test Scores.

					Levene Statistics		t Test Analysis		
Independent variable		**Number of person (n)**	**Medium**	**Sd**	**F**	**P**	**t**	**Sd**	**p**
Pretest	control group	28	9.57	3.18	.70	.40	-.98	55	.32
	experimental group	29	8.65	3.79					

According to Table 8, we can say that data from the achievement test show a normal distribution since the posttest kurtosis value is (-1.03) and the skewness value is between (-.31) in the control group; and the posttest kurtosis value is (.47) and the skewness value is between (-.98) in the experiment group. In addition, the result of the Shapiro-Wilk test rendered a difference in the posttest scores of the control and experiment groups from normal distribution, which was not found significant for the benefit of the control group (control posttest Shapiro-Wilk, 20 p>.05).

Table 8. Results of the Shapiro-Wilk Test Made to Check the Distribution Normality of the Control and Experimental Group Posttest Scores.

						Kurtosis	Skewness
Scale	**N**	**$\bar{X}$**	**Sd**	**df**	**P**		
control group's posttest scores	28	15.32	6.19	28	.20	-1.03	-.31
experimental group's posttest scores	29	24.64	2.90	28	.01	.47	-.98

In order to identify how the significance difference was between the posttest scores of the control and experiment groups that showed normal distribution, an independent samples test was done. As is seen in Table 9, according to Levene's test statistics values, the variations for the total posttest scores of the experiment and control groups did not show homogeneity (F= 23.4; p= 00<.05). The results of the independent samples test done in order to identify whether there was a significant difference between the Turkish course achievement test posttest scores of the students in the control and experiment groups rendered a significant difference between the arithmetic means of the groups (t= 7.30; p<.05). Moreover, the fact that the mean of the posttest scores of the experiment group is higher at a rate of 8.6 than the posttest scores of the control group shows that the level of achievement is much higher in the experiment group than it is in the control group. Elementary School 6th Grade Turkish Course activities designed in accordance with RBT and a part of which was put into practice created a significant difference for the benefit of the experiment group in the students' achievement levels according to the results of the posttests. These findings show that the teaching process in the applied part of the curriculum designed in accordance with RBT is more successful than the teaching process applied via official curriculum.

Table 9. The Results of The Independent Samples Test to Determine Whether There is a Difference between the Posttest Scores of the Experimental and Control Groups.

					Levene Statistics		t Test Analysis		
Independent variable		**Number of person (n)**	**medium**	**Sd**	**F**	**P**	**t**	**Sd**	**p**
Posttest	control group	28	15.32	6.19	23.4	.00	7.30	55	.00
	experimental group	29	24.72	2.89					

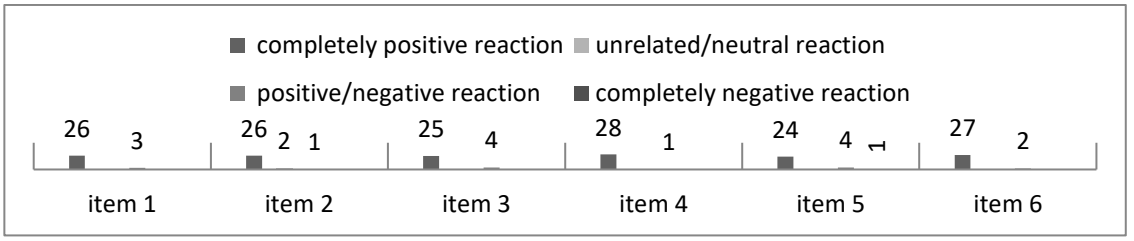
So far, the achievement level of the curriculum designed in accordance with RBT based on the achievement levels of the students participated in the application process of the said curriculum was tried to be ascertained. In this scope, the results of a follow-up test, a portfolio and an achievement test with pretest-posttest control group were reviewed and evaluated. As is seen in the evaluation above, the achievement level of

students in the experiment group is high. It can be concluded that the teaching activities (6th grade) carried out in the "Elementary School Turkish Course Curriculum Designed in accordance with the Revised Bloom's Taxonomy" are efficient and successful. These findings show that the designed curriculum has been successfully put into practice in line with the tests applied and the rendered outcomes.

Findings about the research question "What are the comments of students on the learning process of the Elementary School Turkish Course Curriculum Designed in accordance with the Revised Bloom's Taxonomy?"

This section deals with the metacognitive and affective reactions (feelings, ideas, interest, attaching value, etc.) of the students in the experiment group about the tools (item 1); information given (item 2 and item 3) and activities done in relation to verbal communication, reading, writing skills and grammar (item 4); assessment processes and tools (item 5) and the extent to which the teaching process met the needs (item 6). A qualitative evaluation of the efficiency of the curriculum based on students' metacognitive and affective reactions was carried out. An open-ended survey was used in order to determine the characteristics of the metacognitive and affective reactions (positive, negative and unrelated) of students to teaching process. Information about the development process of the survey and items have been explained in detail in the section dealing with the data collection tools.

Findings from the survey about the metacognitive and affective reactions of students to six items designed according to the different aspects of the curriculum are given in Graphic 4. In each item, values of 1, -1 and 0 are given for students' positive reactions, negative reactions and for unanswered items or unrelated (neutral) reactions respectively (Osgood et al., 1957, narrator: Bilgin, 2014, p. 20- p. 21). Depending on the density of these values, the items were analyzed according to content analysis. In this way, the items were evaluated according to positive, neutral (unrelated) and negative reactions in each item. Since there were positive reactions in some items along with negative ones, those items could not be concluded to be completely negative. Therefore, such items were labeled under groups of "completely positive reaction", "unrelated/neutral reaction", "positive/negative reaction" and "completely negative reaction". The frequency analysis of the data from these gradings were carried out and showed in graphics. The feelings and ideas of students in the experiment group about the teaching process applied according to the curriculum designed are examined in six items. The distribution of these six items by three categories is given in Graphic 4 in detail.



Graphic 4. Experimental group students' opinion on the education process.

DISCUSSION, CONCLUSION AND IMPLICATIONS

The aim of this section is to clarify the discussion points about RBT and some of the processes of curriculum development based on the information and conclusions derived from the present study. Therefore, the first part covers the RBT-oriented discussion points, and the second part deals with discussion points related to curriculum development process.

Positive and negative discussion points related to RBT have been handled under three categories. The first part deals with the unresolved problem situations stated in RBT. The second part evaluates the positive and negative criticisms about RBT and the third part deals with the criticisms on RBT in the curriculum design, application and evaluation process. It is necessary to state that not all of the discussion points below stem from the taxonomy as some of these titles stated in RBT are also related to problems both in curriculum development process and in other areas of the education-teaching process.

In this study, the effects of the revised aspects of BT were examined. To that end; the functions of the remembering, understanding, applying, analyzing, evaluating and creating categories one by one based on the application process carried out with the experiment group were investigated. As is seen in the findings, achievement level in all categories is close to one another. In the revised taxonomy, the use of remembering instead of knowledge both strengthened the compatibility of the taxonomy with the learning theory (structure) and ensured the taxonomy was used as a more efficient and successful tool in the teaching process. A similar case could be talked about in the creating category. Although this category is close to the synthesizing category in terms of content and function, findings showed the creating category and the sub-cognitive processes thereof were successful.

In the present study, in spite of the fact that all categories in RBT are compatible with the learning theory and the structure of the taxonomy, there arose some issues related to the step where the evaluating category stands. These points are considered important as to in which sequence will the cognitive categories be given in RBT. Regarding whether the step on which the deplaced category of evaluating stands was efficient or not, the following conclusions were derived: In the hierarchy in BT, evaluating category is the ultimate step and the cognitive processes are completed with it. Bloom et al. claim the reason for rendering the evaluating category in the final stage is that it will enable the evaluation of the five preceding cognitive categories (Bloom et al., 1956, p. 185). However, in the revised taxonomy, evaluating category is given before the creating category. This gives rise to an unclarity as to how the product created at the end of the process and the learning process will be evaluated. In other words, lack of an evaluation after creating category creates a gap in the completion of the learning process. In addition, to what extent and how the learning process is realized is also unclear. For instance, according to the taxonomy, in the final stage (creating category) of a learning process in which knowledge about poetry is given, students write poems. Then, these poems need evaluating in order to determine the efficiency of the learning process and the taxonomy. However, lack of evaluation for this processes in RBT and the fact that evaluating comes before creating cause unclarity as to how to evaluate a product or the

process. Carrying out evaluating before creating leaves the answers to the questions as to what, why and to what extent something should be evaluated unclear. It is observed that this situation is compatible with neither the theory of the taxonomy nor the creative learning. Thus, in previous studies, it was recorded that the structure of the original taxonomy is more successful due to the fact that evaluation carried out following the synthesis (creating) category is efficient (Schmidt, 2014). In the designed curriculum, this drawback was tried to be overcomed by adding a second part in which activities related to "product evaluation" are included, which is a second evaluation following the creating activities. In order to eliminate this problem about evaluating category, the experimental studies to be conducted need to handle this problem in multiple aspects. Except from this issue, it has been identified that all cognitive categories in the taxonomy are compatible with the learning theory of the taxonomy and support the structure of the taxonomy.

Previous studies show that BT is highly efficient in realizing the goals related to cognitive, affective and psycho-motor domains (Haghshenas, 2015; Timothy, Ferris & Aziz, 2005; Weigel & Bonica 2014). BT was designed by being divided into three parts by cognitive, affective and psycho-motor domains. However, this organization was highly criticized because it separates and distorts the basic structure belonging to the same goal. Basic argument for these criticisms is that affective goals should be included especially in cognitive goals. The fact that cognitive goals are in the first place has led to a cognitive application of the teaching process and neglect of other domains (affective) (Anderson et al. 2001, p. 300). Solutions for this problem were sought in RBT. Therefore, researchers focused on a well design of the integration of the goals related to affective domain with cognitive domain and suggested that the affective domain needed to be made more apparent in RBT. In RBT, researchers included the "metacognitive knowledge" in order to fill the gap between cognitive and affective domains and to emphasize the affective domain. In this way, it was ensured that goals related to cognitive and affective domains are given together (Anderson et al., 2001, p. 300- p. 301).

Anderson et al. (2001) claim that whether giving the goals together in this way will be efficient and successful could only be clarified through further studies. Hence, this issue regarding the taxonomy will be resolved through further studies. Accordingly, this issue was taken into account while writing the goals and objectives in the designed curriculum. In order to add goals and objectives about affective domain, RBT's metacognitive knowledge aspect and the steps in BT's affective domains according to the type of knowledge in some places were used. Because it was observed that apart from some subjects' being close to affective domain in factual, conceptual and procedural knowledge, metacognitive knowledge also supports the affective domain. By means of this sound compatibility, goals and objectives related to affective domain in the designed curriculum were tried to be included.

This section deals with the discussion points stemming from the relation between the curriculum and the teaching and assessment processes based on RBT. The relation between the curriculum and the teaching and assessment processes is quite important. Because if a well-designed curriculum is not applied efficiently and evaluated in accordance with its purpose, it is not possible to claim that the curriculum is successful.

Hence, the curriculum and the teaching and assessment processes are elements that affect and supplement one another. Considered in a mechanical system, an education-teaching process consists of three wheels; the first one being the curriculum, the second one being the teaching processes and the third one being the assessment processes. In the event that one of these wheels does not work in accordance with its purpose, the systematic cycle of the education-teaching process is distorted and the education-teaching process cannot be realized in accordance with its purpose. Based on this view, in RBT, Anderson et al. (2001) dwelt on the issue of moving of these three elements (curriculum, teaching and assessment) away from one another or on the problems stemming from these elements' not working in accordance with their purpose.

During the preparation process of this curriculum designed in accordance with RBT, these issues into account were taken. Therefore, that the curriculum design, application, assessment processes and the organization of these stages are designed, executed and completed in accordance with purpose were strived to be ensured. A systematical interaction between these three important elements were aimed to be created. To this end, coordination from the needs assessment stage, the beginning stage of the curriculum design, to the last stage, which is the evaluation of the curriculum was tried to be maintained. In this way, whether an assessment of a certain subject at the end of the teaching process had met the relevant need was passible to be checked (the first stage of the curriculum).

Upon completion of the curriculum design, the findings from a theoretical and experimental review were evaluated. The findings showed that RBT proved to be a highly efficient tool in assessing the needs, specifying the content, writing goals and objectives, establishing and applying a learning process and evaluating the same. Hence, it was observed that, similar to previous studies, in the present study the taxonomy proved to be efficient in assessing the needs, organizing the education activities and evaluating the same in a curriculum design that is in line with the interests, skills, talents and experience of students (Hanna, 2010; Munzenmaier & Rubin, 2013). This conclusion is thought to eliminate the concern stated by Anderson et al. (2001) about the RBT-oriented education-teaching processes, which is the moving of the curriculum, teaching and assessment processes away from one another and the problems stemming from these elements' not working in accordance with their purpose.

So far, the effects of RBT in general on the curriculum, teaching and assessment processes were dwelt upon and the effects of the taxonomy on these processes were discussed in detail. Accordingly, the criticisms against the taxonomy in this regard were reviewed and the issues thereof were dwelt on. The findings showed that the knowledge aspect of RBT (factual, conceptual, procedural and metacognitive knowledge) could be used as an efficient resource identification tool in the needs assessment and goal and objective creation processes. In addition, it was identified that the cognitive categories of the taxonomy (remembering, understanding, applying, analyzing, evaluating and creating) could be used as a functional tool in the designation of standards and criteria during the objective preparation process. It was also found that the sub-cognitive processes of the cognitive categories in the taxonomy could be used as a functional activity preparation method during the application (activities) process of the designed

curriculum. Similarly, it was found that the nineteen sub-cognitive processes and evaluation category were in the identification of standards and criteria for both teaching process and product assessment. It is expected that these findings will eliminate the concerns regarding the efficiency and success of the taxonomy as a tool in education (Ormell, 2006). Previous studies emphasized the efficiency of a teaching process designed in accordance with the cognitive categories of the taxonomy (Leach, 2006; Madaus, Woods & Nuttall, 1973). Similar to previous studies, the knowledge and cognitive process aspects of RBT proved to be successful in the efficient organization of the elements of the curriculum in the present study (Kidwell, Fisher, Braun & Swanson, 2012; Miller, Nentl & Zietlow, 2010).

The basic criticism by Sosniak to BT is his idea that the taxonomy features a characteristic of "technical fix" (Anderson et al., 2001, p. 296). This aspect called "technical fix" was later criticized within the concepts of "value and the curriculum" in the curriculum development process. Both previous studies and the present study checked the validity of "technical fix" criticism for RBT. In this curriculum designed in accordance with RBT based on the question "What is valuable learning in reality?" we focused on what has much more priority and importance. In the review, this matter was dwelt on in detail based on the interviews with both teachers and students in addition to the success of the draft curriculum design. It was observed that teachers and students reported positive feelings and ideas about the designed curriculum with regard to its success to meet the need for education-teaching, to create an authentic learning environment, to enable the assessment of the learning states in an efficient way, etc. Other studies on RBT-oriented curriculum designs also reached similar conclusions (Crews, 2010; Hawks, 2010; Hanna, 2010; Leach, 2006; Tyran, 2010; Kidwell, Fisher, Braun & Swanson, 2012). These conclusions are thought to eliminate the concerns that the problems in curriculum development process could arise in RBT, too.

In spite of the advances in education, the relation between the goals and teaching processes has not been clarified yet. This unclarity has given rise to the problem of "teaching goals" and the discussions coming up thereof. Although the success of the taxonomy in this problem case has been evaluated in multiple aspects, it is difficult to claim that accurate and complete conclusions have been drawn in this regard. Because the success and usefulness of the designed draft (RBT) could only be clarified through experimental studies. Researchers emphasized that such experimental studies could only be possible with the detailed description of student activities (Krathwohl, 1994, p. 196, paraphrase of Sosniak, 1994, narrator: Anderson et al. 2001, p. 298).

The present study draws the following conclusions about RBT based on the findings about the designed curriculum: In the curriculum draft, the goals, objectives and content were identified and then the learning processes suitable for the former were studied on. Accordingly, the methods to design the learning processes in accordance with the taxonomy were searched for. Hence, the competency of taxonomy in solving the problems in this regard was possible to be studied. The examination showed that the nineteen sub-cognitive processes of the six cognitive categories in the taxonomy were efficient in creating the learning process. These sub-cognitive processes were identified to be compatible with learning activities during the application process and therefore, it

was concluded that the taxonomy supported the learning process in terms of its structure. In addition, the results of the tests done in the application process and the feelings and ideas stated by the students in the experiment group support this conclusion. It is observed that previous studies reached similar conclusions. In one of these studies, it was found that the teaching process method developed in accordance with the taxonomy was reliable and compatible with student activities as they supported students' high level thinking processes and critical and reflective thinking skills (Plack, Driscoll, Marquez, Cuppernull, Maring & Greenberg, 2007). These results are thought to serve as an answer to criticisms such as the taxonomy's activities especially for improving critical and creative thinking skills are not successful and that its reliability in the American education system should be questioned (Booker, 2007). With the following studies, a framework about the functionality of RBT in the education-teaching process was aimed to be created.

Anderson et al. (2001) dwell on the problems in the assessment process in three groups according to their sources. These problems are as follows: lack of sufficient improvement in the multiple choice item formats; giving more importance to the process than the product itself in the measurement process; and the number of criteria and sequencing of tasks in performance assessments. The first problem drew the attention of researchers in both BT and RBT. It was noted that in spite of the advances in test technology, there had not been enough advances in the item design technology (Anderson, 2001). However, in BT, the course of preparing multiple choice questions based on different cognitive categories is discussed extensively. Accordingly, four different follow-up tests were developed in order to measure student learning in the designed curriculum. During the process, the test items were tried to be developed in a way that they would mainly cover the five cognitive categories (remembering, understanding, applying, analyzing and evaluating) of the taxonomy. In these achievement tests designed in accordance with the relevant knowledge type, we used different item types (gap filling, multiple choice, visual reading and interpreting, interpreting based on visual writing, open-ended, etc.). The results of the application process showed that these items made measurements that were fit for the purpose.

Another problem in the assessment process is that process is more important than the product itself. In order to overcome this problem, a large number of satisfying assessment methods that could realize a valid and efficient assessment between the product and the process are needed (Anderson et al. 2001, p. 299). The third problem about the assessment process is about the drawbacks in the number of criteria and sequencing of tasks while assessing the student performance. In other words, the problem stems from the discrepancy between the student performance and the criteria and standards specified by the teacher. The quality of the results and the existence of undesired results matter to a great extent while measuring student performance. Anderson et al. (2001, p. 299) note the elements undesired in the performance measurements as follows: Costing time, difficulty, inconsistent measurements, results open to interpretation, and the difficulties in carrying out, maintaining and restoring the measurements. The compatibility between the student performance and the criteria and standards specified in the assessment process for the designed curriculum were

reviewed. Hence, the effect of the taxonomy in this regard was taken care of critically. In this scope, the following conclusions based on the evaluation of the teaching process applied were reached: Each item in four follow-up tests represents the relevant objectives. Items in the achievement tests that were designed according to the knowledge type they are related to measure to what extent the objective is reached. The results in the findings section show that students answered these questions in line with the criteria and standards specified and with a high rate of success. Measurements carried out show that in the assessment process, student performance and the criteria specified in the curriculum are compatible with one another. Hence, it can be suggested that the taxonomy can be used as a measurement tool in order to ensure a sound compatibility between student performance and the criteria specified.

Problems stemming from assessment should not be considered alone because they are closely related to the preceding processes as assessment is the final stage of the education-teaching process. Therefore, especially in curriculum development studies, the relation between the curriculum and the teaching and assessment processes should be taken into account while handling the problems stemming from the assessment process. In addition, it is important to study the internal and external factors that affect the said process.

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REFERENCES

Altındağ, M. & Demirel, Ö. (2013). Yeni taksonominin 11‟inci sınıf dil ve anlatım dersi öğrenme ürünlerine katkısı. *Hacettepe Üniversitesi Eğitim Fakültesi Dergisi*, 28(2), 1-13.

Anderson, L. W., Krathwohl, D. R., Airasian, P. W., Cruikshank, K. A., Mayer, R. E., Pintrich, P. R, Raths, J. & Wittrock, M. C. (2001). *A taxonomy for learning, teaching, and assessing: a revision of Bloom's taxonomy of educational objectives.* U.S.: Addison Wesley Longman, Inc.

Avşar, G. (2017). 2006 ve 2015 Türkçe öğretim programlarında kullanılan fiillerin yenilenmiş Bloom taksonomisine göre sınıflandırılması. *Unpublished Master Thesis.* Bülent Ecevit Üniversitesi, Zonguldak.

Beyreli, L. & Sönmez, H. (2017). Research issues focused on studies concerning Bloom taxonomy and the revised Bloom taxonomy in Turkey. *International Journal of Languages Education and Teaching*, *5*(2), 213-229.

Bilgin, N. (2014). *Sosyal bilimlerde içerik analizi teknikler ve örnek çalışmalar* (Extended 3rd edition). Ankara: Siyasal Kitapevi.

Bloom, B. S. (1979). *İnsan nitelikleri ve okulda öğrenme* (Trans. Durmuş Ali Özçelik). Ankara: Millî Eğitim Basım Evi.

Bloom, B. S. (Ed.), Engelhart, M. D., Furst, E. J., Hill, W. H. & Krathwohl, D. R. (1956). *Taxonomy of educational objectives: the classification of educational goals. Handbook 1: Cognitive domain*. New York: David McKay.

Booker, M. J. (2007). A roof without walls: Benjamin Bloom's taxonomy and the misdirection of American education. *Acad. Quest*, 20, 347-355.

Çintaş, Y. D. (2015). Türkçe dersi sınav sorularının yeniden yapılandırılan Bloom taksonomisine göre analizi. *Gaziantep University Journal of Social Sciences*, 14(2), 479-497.

Creswell, J. W. & Clark, V. L. P. (2015). *Karma yöntem araştırma tasarım ve yönetilmesi* (Translation from the 2nd edition) (Trans. Eds. Yüksel Dede & Selçuk Beşir Demir). Anı Yayıncılık: Ankara

Crews, C. F. (2010). The effects of using Bloom's taxonomy to align reading instruction with the Virginia Standards of learning framework for English. *Unpublished Doctoral Dissertation.* Liberty University, Virginia.

Durukan, E. (2009). 7. sınıf Türkçe ders kitaplarındaki metinleri anlamaya yönelik sorular üzerine taksonomik bir inceleme. *Millî Eğitim Dergisi*, 181, 84-93.

Eroğlu, D. & Sarar Kuzu, T. (2014). Türkçe ders kitaplarındaki dil bilgisi kazanımlarının ve sorularının yenilenmiş Bloom taksonomisine göre değerlendirilmesi. *Başkent University Journal of Education, 1*(1), 72-80.

Eroğlu, D. (2013). 6, 7, 8. sınıf Türkçe çalışma kitaplarındaki dil bilgisi soruları ve kazanımlarının yenilenmiş Bloom taksonomisine göre değerlendirilmesi. *Unpublished Master Thesis*. Başkent Üniversitesi, Ankara.

Ersözoğlu, Z. N. & Kazı, H. (2011). İlköğretim beşinci sınıf sosyal bilgiler dersinde uygulanan yansıtıcı düşünmeyi geliştirme etkinliklerinin akademik başarıya etkisi. *Eğitim Fakültesi Dergisi*, *24*(1), 141-159.

Eyüp, B. (2012). Türkçe öğretmeni adaylarının hazırladığı soruların yeniden yapılandırılan Bloom taksonomisine göre değerlendirilmesi. *Kastamonu Eğitim Dergisi*, *20*(3), 965-982.

Fitzpatrik, J. L., Sanders J.R. & Worthen B.R. (2004). *Program evaluation: alternative approaches and practical guidelines* (3rd Edition). United States: Pearson.

Forehand, M. (2006). Bloom's taxonomy. Retrieved from: www.epltt.coe.uga.edu/index .php?title=Bloom%27sTaxonomy (11.03.2017).

Güftâ, H. & Zorbaz, Z. (2008). İlköğretim ikinci kademe Türkçe dersi yazılı sınav sorularının düzeyleri üzerine bir değerlendirme. *Çukurova Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, *17*(2), 205-218.

Haghshenas, Z. (2015). Case studies in three domains of learning: cognitive, affective, psychomotor. *International Journal of Social, Behavioral, Educational, Economic, Business and Industrial Engineering*, *9*(6), 2099-2101.

Hanna, W. (2010). The new Bloom's taxonomy: *Implications for Music Education*, *108*(4). Retrieved from: https://eric.ed.gov/?id=EJ767661 (13.01.2016)

Hawks, K. W. (2010). The effects of implementing Bloom's taxonomy and utilizing the Virginia standards of learning curriculum framework to develop mathematics lessons for elementary students (*A Dissertation Presented to the Faculty of the School of Education Liberty University in Partial Fulfillment of the Requirements for the Degree Doctor of Education)*.

Keray B. (2012). Söyleşi metinleri yoluyla sekizinci sınıf öğrencilerinin soru sorma becerilerinin yenilenmiş Bloom taksonomisine göre incelenmesi. *Unpublished Master Thesis*. Sakarya University, Sakarya.

Kidwell, L. A., Fisher, D. G. Braun, R. L. & Swanson, D. L. (2012). Developing learning objectives for accounting ethics using Bloom's taxonomy. *Accounting Education*, *22*(1), 44-65.

Leach, E. (2006). Instruction-based action guidelines built on Bloom's revised framework: setting objectives for entrepreneurship teaching. *Small Enterprise Research, 14*(2), 74-92.

Madaus, G. F., Woods, E. M. & Nuttall, R. L. (1973). A causal model analysis of Bloom's taxonomy. *American Educational Research Journal*, *10*(4), 253-262.

Miller, C. Nentl, N. & Zietlow, R. (2010). About simulations and Bloom's learning taxonomy. *Developments in Business Simulations and Experiential Learning*, (37), 161-171.

Munzenmaier, C. & Rubin, N. (2013). *Perspectives Bloom's taxonomy: what's old is new again.* Santa Rosa: The eLearning Guild. Retrieved from: http://educationalelearnin gresources.yolasite.com/resources/guildresearch_blooms2013%20(1).pdf (01.08.2016)

Ormell, C. P. (2006). Bloom's taxonomy and the objectives of education. *Educational Research*, 17, 3-18.

Plack, M. M., Driscoll, M., Marquez, M., Cuppernull, L., Maring, J. & Greenberg, L. (2007). Assessing reflective writing on a pediatric clerkship by using a modified Bloom's taxonomy. *Ambulatory Pediatrics, 7*(4), 285-291.

Sarar Kuzu, T. (2013). Türkçe ders kitaplarındaki metin altı sorularının yenilenmiş Bloom taksonomisindeki hatırlama ve anlama bilişsel düzeyleri açısından incelenmesi. *Cumhuriyet Üniversitesi Sosyal Bilimler Dergisi,* 37, 1.

Schmidt, S. J. (2014). Teaching learning strategies: connections to Bloom's taxonomy. *Journal of Food Science Education*, 13, 59-60.

Seddon, G. M. (1978). The properties of Bloom's taxonomy of educational objectives for the cognitive domain. *Review of Educational Research*, *48*(2), 303-32.

Sönmez, H. (2017). Yenilenmiş Bloom Taksonomisine göre tasarlanan Ortaokul Türkçe Dersi Öğretim Programı (Model Önerisi). *Unpublished Doctoral Dissertation*. Marmara University, İstanbul.

Timothy L. J. F., Ferris & Aziz, S. M. (2005). A psychomotor skills extension to Bloom's taxonomy of education objectives for engineering education. *Exploring Innovation in Education and Research* Taiwan, 1-6.

Tüzel, S., Yılmaz E. & Bal, M. (2013). An investigation of prospective Turkish teachers‟ questions regarding text processing in accordance with revised Bloom‟s taxonomy. *The Journal of Academic Social Science Studies, 6*(8), 1085-1100.

Tyler, R. W. (1949). *Basic principle of curriculum and instruction*. Chicago: University of Chicago Press.

Tyran, C. K. (*2010*). Designing the spreadsheet-based decision support systems course: An application of Bloom's taxonomy. *Journal of business Research*, *63*(2), 207-216.

Ungan, E. (2007). A case study on critical thinking: (analysis of students‟ written responses to short stories via Bloom‟s taxonomy). Unpublished Master Thesis, Ankara University, Ankara.

Weigel, F. K. & Bonica, M. (2014). An active learning approach to Bloom's taxonomy: 2 games, 2 classrooms, 2 methods. *The United States Army Medical Department Journal*, 21-29.

APPENDIX

A section from The Secondary Turkish Curriculum Designed according to the Revised Bloom's Taxonomy

Table 10. Objectives and Goals of Fifth Grade Writing Skills of in "Secondary Turkish Curriculum Designed According to Revised Bloom's Taxonomy"

***Knowledge dimension of writing skills*/goals**	**Objectives of writing skills**
Factual knowledge *Goal 1: Learning the concepts and terms related to writing skills.*	O1: Remembers the concepts and terms of the writing process -target group, purpose, subject, and plan -elements of the writing process/recall, envisage in the min
	O2: Understands the concepts and terms of the writing process (target group, purpose, subject, plan and text type). -target audience, purpose and subject / determination, description -type of text to be written considering the text type properties / determination the length of the text, how and how much to convey ideas and emotions / focusing on Introduction, development and conclusion sections / sampling
	O3: Uses the concepts and terms of the writing process. O4: Write an essays consisting of short paragraphs from a sample text. - spelling rules and punctuation/ benefit from - spelling rules and punctuation / practice - writing purpose, subject and main idea / determining - opinions, grounds and evidence used / concordance -appropriate transitional statements between paragraphs/using -name, noun, adjective, adjective clauses / using - a suitable title / writing
	O5: Analysis the draft that creates from the text. - introduction, development and conclusion parts/separation from each other, -introduction, development and conclusion parts/compliance with each other, justification
	O6: Evaluates the draft that creates from the text. -anonymity-distorting expressions, spelling rules and punctuation mistakes / checking -request of information and ideas / review
	O7: Using the concepts and terms of the writing process creates an effective and creative text. - a creative text which has the main idea and the subject of introduction, development

	and result sections, having an effective expression / writing
Metacognitive knowledge/Affective domain *Objective 4: Learning the writing process that will address the* interests, attitudes and values and support the individual learning awareness.	O1: Realizes the power of personal learning in writing process. *-where, how much, and how will be useful the text/* envisage in the mind
	O2: Understands the elements that support personal learning power in writing process. *- the strengths and weaknesses in the process of creative and creative writing/ recognizing* *- the types of writing that can help when expressing thoughts and opinions in writing/ determining* *- the need for writing/ descripting*
	O3: Applies methods and techniques that support personal learning power and address their interests and attitudes in writing process. *- sample texts to show where, how and why different writing techniques will be used/benefit from* *- the motivation provider techniques/using*
	*0*4: Analysis the writing process according to interests and attitudes. *-necessary and unnecessary information, useful and useless details / separating from each other* *- the harmony and thought, interest and attitude that are intended for writing/ seeing*
	*O*5: Evaluates the written communication process according to interest and attitude. -the effectiveness of the techniques used in the text/ checking, inference
	O6: Creates information (opinion) that is appropriate to their interests and attitudes for a creative writing process. -different writing methods and motivation provider techniques/ creating

Table 11. The Activities of the Factual Knowledge Domain Related to Writing Skills

Writing ability of the fifth-grade activities of the first goal "Learning the concepts and terms related to writing skills".
BEGINNING STAGE
Preparation: In the first lesson, students' interest, attitude, needs and experiences related to writing process will be determined. During the course, the following activities will be performed in order to take into account these characteristics of the students. Before starting the lesson, please tell them to prepare "a product file that save the texts" they will chronologically put and save their text in this file.
Curiosity: At this stage, activities related to the target audience in the writing process, drawing attention to the concepts of purpose, subject and plan will be included. Ask them to think about what they might need to write a text in this context. In this process, give them hints to identify the target audience, purpose, subject, plan, word, sentence, paragraph and title.
Remember (Recall): Depending on the research they make, they will tell Ibn-i Sina in writing that they have learned. Make sure that they can recognize the writing process and writing elements such as target audience, writing purpose, subject, writing plan and sentence, paragraph and title (O1a). Then direct them to envisage how to use these elements in the text that they will write. (O1b)

DEVELOPMENT (DEVELOPING) STAGE

Understand: This stage includes the activities related to understanding the elements used in the writing process. Provide detailed information about the target group of the writing process, purpose, subject, plan, word, sentence, paragraph and title. When reading or writing a text, they give place at the recall level associated with the subject, main idea or main emotion, ancillary ideas or emotions. They determine who they will write the text for, and the purpose of writing and what they will write about (O2a). Then they explain the target audience, the purpose and the subject (O2b). Read the biography you have prepared in the classroom and give information about the type of biography. From this information and other examples, direct them to identify the type properties of the text they will write (O2c). Then they focus on the length of text they will write, how text and ideas are to be given, and how much to give. (O2d). At this stage, they give an example from the introduction, development and conclusion (text, node and solution) sections of the text they will write (O2e). Before you start writing, give them information about the punctuation (point, comma, two-point, three-point, exclamation mark, hyphen, quotation marks, apostrophe, semicolon, long line, brackets, sign of –den) and usage of spelling rules and grammar (writing the names of language, world, planet, star, war, age and institution and writing the conjunctions the "mi, de, ve") . Then, warn them to use the punctuation and grammar in their text correctly.

Application: At this stage, writing practices that consist of short paragraphs (based on essays) will be applied by using concepts and terms of writing process. First of all, tell the students the importance of writing and punctuation in the writing process. Tell them that they can benefit from the sample texts that you give in the reading lesson to see how spelling and punctuation are used (O3a). Thus, they will be provided to see the proper and correct use of spelling and punctuation (brackets, three-point, slash, question attachment, point, comma, colon, exclamation point, quotation mark, hyphen, speech line, apostrophe, semicolon and box brackets) in their writing process (O3b). At this stage, explain the tasks of frequently used punctuation marks in the text. Ensure that their respective punctuation is reflected in their text. Give information about the type of biography before writing. In accordance with their research about Ibn-i Sina, refer them to write a biography text depending on their aims. In the first paragraph of the draft text, which consists of introduction, development and conclusion sections, tell them to express their aims clearly (O4a). Then direct them to conclude the opinions, justifications and evidence they provide in order to effectively present the main idea or theme in a manner appropriate to the purpose of writing (O4b). They use appropriate transitions between the paragraphs and the narrative of expressing narrative methods to present the main idea and theme in a unity (O4c). Then give information about name, noun, adjective and adjective phrase. In their short biographies, warn them to use name, noun, adjective and adjective phrase (O4d). In this section, they write a title that is appropriate to the text of the introduction, development and conclusion sections (O4e).

Analyze: At this stage, tell the students analyze the concepts and terms in their short paragraphs. To do so, tell them to distinguish between the introduction, development and conclusion sections in their texts (O5a). They can see how the integration of the main idea or theme with the introduction, development and outcome sections (O5b). Finally, they justify how the integration of the introduction, development and conclusion sections of the main idea or theme is effectively done (O5c).

Evaluation: At this stage, activities will be done in order to evaluate the short texts written by the students depending on the use of concepts and terms in the writing process. To analyze the texts tell the students to share their biography with each other. The students supervise whether there are spelling, punctuation and the expressions mistakes that disrupt the meaning integrity of the biography draft written by their friend (O6a). He / she reviews the reliability of the information and ideas used in the friend's biography (O6b).

COMPLETING (CONCLUSION) STAGE

Create: At this stage, the students will be given the opportunity to use concepts and terms in a more functional and effective way based on the experiences they gained from the sample texts and previous writing activities. Considering the instructions given in the previous writing activity and the negotiation of friends; his / her subject and his / her main idea; design a creative text describing the life of a person (mother, father, grandfather, grandmother, etc.) consisting of introduction, development and conclusion sections and a rich narrative. They write their text (O7a).

After writing the text, make the following steps to evaluate the functionality of the concepts and terms of the texts: In accordance with his/her purpose he/she checks whether these elements (the subject, theme, events characters and the main idea) are given by effectively and accurately in the text that has introductory, development and conclusion sections and rich narration. They check whether their text is appropriate for their writing purpose. They make inferences about whether the idea, theme, subject, event, characters are given in their text effectively and accurately.

After the end of this activity, apply the achievement test you have prepared in accordance with the achievements in this domain. Score the answers given to the test. Write the average score determined for each item in the "The Objective Checklist" in front of

the relevant objective. Based on this average, please indicate your impression and thoughts about the effectiveness of this course and the realization level of the objectives in the "Explanation" section.

The Objective Checklist

Goal 1: Learning the concepts and terms related to writing skills.	Achievement test results of this domain of knowledge [2]	Unachieved	Less achieved	Complete achieved	Explanation
O1: Remembers the concepts and terms of the writing process (target group, purpose, subject, and plan). (elements of the writing process/recall, envisage in the mind)					
O2: Understands the concepts and terms of the writing process (target group, purpose, subject, plan and text type). (-target audience, purpose and subject / determination, description - type of text to be written considering the text type properties / determination the length of the text, how and how much to convey ideas and emotions / focusing on Introduction, development and conclusion sections / sampling					
O3: Uses the concepts and terms of the writing process. O4: Write an essays consisting of short paragraphs from a sample text. - spelling rules and punctuation/ benefit from - spelling rules and punctuation / practice - writing purpose, subject and main idea / determining - opinions, grounds and evidence used / concordance - appropriate transitional statements between paragraphs/using -name, noun, adjective, adjective clauses / using - a suitable title / writing)					
O5: Analysis the draft that creates from the text. (- introduction, development and conclusion parts/separation from each other,					

[2] An achievement test will be applied according to the objectives of this domain of knowledge. The items in the achievement test will be arranged to cover the above objectives. The achievement test will be examined according to the answers of the students. Achievement averages for each objective will be calculated. The averages will be written against the above-mentioned objective. Based on these averages and other learning outcomes (product files, results of the performances of the students in and outside the classroom for this objective, teacher observations, teacher diaries, etc.) related to the objective, the realization status of the objectives will be indicated in the relevant column in the checklist. The reason why the objective is not realized will be explained in the "Explanation" section.

-introduction, development and conclusion parts/compliance with each other, justification)					
O6: Evaluates the draft that creates from the text. (-Anonymity-distorting expressions, spelling rules and punctuation mistakes / checking -Request of information and ideas / review)					
O7: Using the concepts and terms of the writing process creates an effective and creative text. (a creative text which has the main idea and the subject of introduction, development and result sections, having an effective expression / writing)					
Appendix: Sample writing texts					

Table 12. The Activities of the Metacognitive Knowledge Domain Related to Writing Skills

Writing ability of the fifth-grade activities of the fourth "Learning the writing process that will address the interests, attitudes and values and support the individual learning awareness".

BEGINNING STAGE

Preparation: This section includes the activities related to being a conscious writer. And also it includes improving their capacity to be better. And includes using the strategies, methods and techniques that will help him/her in the writing process. You can direct students before class about this subject. Prepare related materials to support this subject in the course.

Curiosity: Before you start the lesson, they think about the difficulties they face while writing text on any subject. Talk about the difficulties of writing when you are writing and how they affect your writing motivation to be concrete.

Remember (Recall): After you, the students indicate the difficulties they are experiencing in the writing process. Explain that they will write a short story about tolerance. Firstly, explain this concept by giving appropriate examples about the importance of tolerance in society (accepting an apology, respecting others' lifestyles). Then ask them whether they have witnessed events of tolerance or intolerance. State that they will write a short story with one or two-paragraph about these events and situations. Before they write this story, they can imagine where, how, and how useful it will be (O1a).

DEVELOPMENT (DEVELOPING) STAGE

Understand: At this stage, activities that will enable the students to understand what are the elements that support personal learning power/feature in writing skills as a conscious and productive writer will be done. *Describe the characteristics of the short story and the ones that should be considered in the short story writing process.* Before writing a short story about tolerance, students recognize their strengths and weaknesses as a critical and creative author (O1a). Then they determine the subject of the short story and the convenience of writing the subject (O2b). They explain why they choose this example and why they need to write this topic (O2c).

Application: At this stage, the students will write a story about tolerance, which consists of short paragraphs, using the writing strategies that support individual learning power to express their thoughts and feelings more effectively. Before starting the writing process, they can use an exemplary story (a short story example from the textbook) to determine where and how to use different writing strategies to express their feelings and thoughts more effectively (O3a). When writing a short story, they can be aware of they have enough information on some topic or they do not have enough information on some topics. In addition, direct them about to should see the strategies of writing according to their personal skills and interests, write with unquoted self-confidence. And they use strategies such as writing in accordance with their ability and learning power in the process of writing. In this step, they rely on motivational strategies such as self-confidence, determination, utilitarianism, and creativity and use them in the writing process (O3b).

Analyze: At this step, orientate them to examine the text according to the individual learning power based on interests and attitudes. First, they separate the necessary and unnecessary information, useful and useless details in their text (O4a). Then they see the harmony of this story with their feelings and thoughts, their academic and self-efficacy, their inflated self-confidence, their goals, their ability to explain, their attitudes and interests (O4b). Indicate that the short story they wrote should justify their compatibility with these traits. In this section, they examine whether the short story they create can affect them and others as a cognitive, affective and social negative.

Evaluation: At this stage, the following activities are carried out for students to evaluate short stories based on individual learning power: In the short story writing process, they control the effect of motivation-providing techniques such as self-confidence, determination, utilitarianism and creativity on writing motivation (O5a). They make inferences about the effect of motivational techniques used in the writing process on writing motivation (O5b). They make inferences about whether or not their short story will address the interests and attitudes of others, and whether it will adversely affect their interests and attitudes about the writing process.

COMPLETING (CONCLUSION) STAGE

Creating: This section consists of two parts. Firstly, includes the activity of creating knowledge (ideas) appropriate to their interests and attitudes (the power of individual learning). Explain why we should love and protect nature before writing this story about “Endangered animals". Then, draw their attention to the pandas that are about to become extinct. Ask them if there are other animals that are about to be extinct. Tell them to design and write a short story about the life of these animals. Students write a creative story considering the following criteria (O6a): taking into account the directives and balances given in the previous activity, knowing where and why they will use different writing strategies, knowing they have enough information some areas not as well as not have in some areas, aware of the knowledge, using appropriate writing strategies . “

In the second part, the students control how the writing methods used in the writing process and the motivational techniques such as self-confidence, stability, utilitarianism, and creativity affect their writing process. They make inferences about how these methods and techniques they use affect writing processes.

After the end of this activity, apply the achievement test you have prepared in accordance with the achievements in this domain. Score the answers given to the test. Write the average score determined for each item in the "The Objective Checklist" in front of the relevant objective. Based on this average, please indicate your impression and thoughts about the effectiveness of this course and the realization level of the objectives in the "Explanation” section.