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Alignment of the Turkish 11th grade philosophy skill-based activity book with Bloom's revised taxonomy

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Abstract. This study examines the alignment of the assessment tools included in the 11th Grade Philosophy Skill-Based Activity Book prepared by the Turkish Ministry of National Education with the Cognitive Process Dimension of Bloom's Revised Taxonomy (BRT). Conducted within a qualitative research framework using document analysis, the study analyzed all 115 assessment tools in the book without sampling, treating each question as an independent unit of analysis. The tools were coded according to the six cognitive process categories of BRT: remembering, understanding, applying, analyzing, evaluating, and creating. Inter-coder reliability was calculated as .91, indicating a high level of consistency. The findings reveal that assessment tools are predominantly concentrated at the understanding level (44%), while the applying level is represented at a limited rate (4%). Although 38% of the questions correspond to higher-order cognitive processes, sub-dimension diversity within these levels appears open to further development. In particular, the absence of the "organizing" sub-dimension in analyzing and the "planning" sub-dimension in creating suggests that higher-order cognitive processes could be structured in a more balanced and comprehensive manner. Overall, the cognitive distribution of the assessment tools may be further enhanced in line with the higher-order thinking skills emphasized in policy documents. Strengthening constructive alignment among curriculum goals, instructional practices, and assessment tools is recommended to improve the effectiveness of skill-based assessment.

Keywords: Bloom's revised taxonomy, philosophy education, skill-based assessment, cognitive process dimension, constructive alignment

Introduction

Learning approaches adopted in Turkey in recent years have shifted from a traditional understanding that transfers information passively toward a constructivist perspective that focuses on how the learner derives meaning from information (Lipman, 2003). In this approach, knowledge is not presented to the learner as a ready-made and immutable content; instead, the individual reconstructs knowledge in line with their existing experiences and cognitive schemas. Therefore, the learning process is not regarded as a mere receptive mechanism, but as an active, interpretive, and meaning-based mental activity.

Instructional programs based on a "ready-made information" approach, which aims to transfer information to individuals without questioning, do not produce permanent and functional learning. The essential goal should be for the student not to memorize information, but to be able to analyze it, evaluate it, and transfer it to new situations. Indeed, the fundamental aim of the contemporary educational approach is not to raise individuals who store information, but to raise individuals who can interpret and use the information they have learned and ultimately produce a product from this information (Ercan & Çıldır, 2024).

Education does not only equip the individual in an academic sense; it is a process that prepares them for the requirements of the age, provides cognitive and social skills, and develops individual awareness. In

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this respect, education is not merely a tool for acquiring knowledge or specializing in a field. It is also a developmental area where the individual shapes their cultural and social identity and gains the basic skills necessary to sustain their life. As Immanuel Kant emphasized, a human being can only realize their potential through education; they can construct themselves by revealing and developing their natural talents. Within this framework, education can be considered one of the fundamental pillars of the individual's process of liberation and self-actualization.

The individual is the primary subject of both education and philosophy. The educational process aims not only to transfer knowledge but also to develop the individual's capacity for thinking, questioning, and meaning making. In this context, there is a necessary and dynamic relationship between education and philosophy. An educational understanding devoid of philosophical foundations may lose its direction in determining its aims, grounding its values, and making sense of learning processes (Dewey, 1916). The philosophy of education guides teaching processes by providing a theoretical framework for why, how, and in line with which values education should be conducted (Noddings, 2018).

A child's skills in reasoning, imagining, and making sense of the world they live in are of decisive importance for both cognitive and affective development. Supporting critical thinking, analytical reasoning, and problem-solving skills at an early age strengthens the individual's lifelong learning capacity (Lipman, 2003). Therefore, introducing children to philosophical inquiry from a young age contributes to their intellectual independence. Rather than offering ready-made answers, philosophy education instills the habit of asking questions; thus, the individual develops the skill to evaluate and analyze the problems they encounter through reason.

Indeed, contemporary educational approaches emphasize that learning is not only a cognitive process but also a process of meaning-making (Bruner, 1996). The active participation and curiosity of the student play a central role in the meaning-making process. The practice of philosophical thinking keeps the student's curiosity alive and contributes to the development of intrinsic motivation for learning. Just as sports are indisputably important for physical development, reading, understanding, and questioning activities are equally necessary for mental development. An individual who gains the habit of philosophical thinking becomes stronger not only in terms of academic success but also in terms of the potential to lead a conscious, questioning, and happy life (Splitter & Sharp, 1995).

In conclusion, the relationship between education and philosophy forms the basis of the holistic development of the individual. Education finds its direction through the theoretical and ethical foundations it receives from philosophy; philosophy, in turn, is concretely reflected in social life through education. This mutual interaction is indispensable for raising thinking and responsible individuals.

The Relationship Between Technology and Education

In our age, where science and technology surround our daily lives, individuals can instantly encounter different cultures, places, and information sources by transcending physical boundaries. While digital environments and virtual spaces expand the individual's field of experience, they also accelerate the processes of accessing information. However, this speed brings the risk of bypassing the meaning-making stages of information superficially. For this reason, the contemporary understanding of education must treat technology not only as a tool for accessing information but as a component of the process of meaning-making, questioning, and critical evaluation (Selwyn, 2016).

The widespread use of virtual environments allows the individual to observe realities outside their own living space, and this situation reshapes the individual's perception of space, identity, and social belonging. Individuals growing up within digital culture are exposed to multiple stimuli, which affects the functioning of cognitive processes (Prensky, 2001). Therefore, the stages of thinking and learning processes cannot be evaluated independently of the digital transformation. For educational systems to adapt to this change, they must develop skills such as critical thinking, media literacy, and digital competence from an early age (UNESCO, 2018).

In this context, the role of technology in education is not merely a matter of instrumental use; it is also related to pedagogical foundations. Technology integration does not produce healthy results without considering students' developmental stages, levels of cognitive readiness, and learning tasks. The justification and criticism of technology use in education gain meaning only when evaluated within the framework of developmental theories and the psychology of learning (Kozma, 2003). In this way, technology can transform from being a superficial element that accelerates the learning process into a pedagogical tool that supports critical and in-depth thinking.

In conclusion, the relationship between technology and education is a mutual interaction. Education should use technology consciously and purposefully to develop the individual's critical thinking capacity, and technology should be structured in a way that supports the cognitive and ethical development targeted by education.

Adolescence is a developmental stage in which the individual experiences significant transformations both biologically and psychosocially. During this period, while the individual tends to establish closer relationships with the opposite sex, the need for emotional attachment and acceptance increases significantly. Although family support maintains its importance, the influence of peer groups becomes more dominant in shaping the adolescent's behavior (Steinberg, 2014). Peer acceptance, social status, and group belonging are among the factors that directly affect the adolescent's self-perception.

In this process, the individual gives more importance to their outward appearance, lifestyle, and social image; in parallel, the level of fragility may also increase. Sensitivity to the evaluations of others rises, and self-worth is often shaped by external feedback. According to Erikson's (1968) theory of identity, the adolescent period is defined as the stage of "identity versus role confusion." In this stage, while searching for an answer to the question "Who am I?", the individual tends to construct their identity through the distinction of self-other-others. While constructing their living space on the axis of "self" and "others," they are in a search for belonging on the one hand, and they try to develop a unique identity by striving not to be the "other" on the other hand.

Adolescence is also a period when abstract thinking skills become prominent. According to Piaget's (1972) theory of cognitive development, individuals at this stage transition to the "formal operational" stage, gaining the capacity to think about possibilities, engage in hypothetical reasoning, and perform critical evaluations. Despite this cognitive progress, emotional sensitivity and peer pressure play a strong role in guiding behavior. Peer solidarity is as much a prominent risk area of this period as peer bullying and social exclusion (Santrock, 2020).

In this context, families and educational institutions should adopt a guiding approach that considers the adolescent's developmental characteristics, rather than trying to take their increasing desire for independence completely under control. Since the fundamental aim of education is to develop desired behaviors in the individual and support social adaptation (Senemoğlu, 2023), these aims must be structured in harmony with the adolescent's identity search and emotional sensitivity. Otherwise, the individual may turn to different forms of belonging by producing alternative "objects of desire" to the desired behaviors.

Particularly, philosophy education provided during this period can serve a functional role in supporting the individual's abstract thinking capacity and identity search. Philosophical inquiry contributes to the adolescent's making sense of the relationship they establish both with themselves and with others. However, the attainment of this education is closely linked to the relationships the adolescent establishes with their social environment and the dynamics of belonging. Therefore, educational content and methods should be designed by considering the cognitive, emotional, and social characteristics of the adolescent period.

At this exact point, the function of philosophy education becomes more visible in the period of adolescence, when abstract thinking skills develop significantly. Philosophical thinking enables the individual not only to acquire knowledge but also to make sense of, question, and evaluate the social

structure they live in by developing a critical distance. The conscious internalization of social norms and values becomes permanent only by questioning and justifying their foundations. For this reason, philosophy education does not aim for the individual to experience a passive process of adaptation, but rather to develop a grounded sense of belonging

The scope and implementation of philosophy education in Turkey are determined within the framework of the curriculum prepared by the Ministry of National Education. In the current Secondary Education Philosophy Course Curriculum, published based on the decisions of the Board of Education and Discipline, the aims of the course, its content structure, and the principles of assessment and evaluation are defined in detail (Ministry of National Education [MoNE], 2023). Accordingly, students are introduced to the philosophy course in the 10th grade and complete their education with the course given in the 11th grade.

When the program structure is examined, it is seen that a more conceptual and problem-based approach is adopted in the 10th grade. The units "Recognizing Philosophy," "Thinking with Philosophy," "Basic Topics and Problems of Philosophy," and "Philosophical Reading and Writing" aim for the student to meet philosophical thinking methods and acquire basic concepts (MoNE, 2023). In contrast, the historical approach comes to the fore in the 11th-grade program; under the headings of "6th Century BC – 2nd Century AD Philosophy," "2nd Century AD – 15th Century AD Philosophy," "15th Century – 17th Century Philosophy," "18th Century – 19th Century Philosophy," and "20th Century Philosophy," the main discussions of the periods and the views of philosophers are handled (MoNE, 2023). This structuring aims to create a conceptual infrastructure in the 10th grade and to provide an understanding of the historical development of philosophical thought in the 11th grade (Ministry of National Education [MoNE], 2023).

Preparing Effective Assessment Tools

Changing instructional programs adopt an assessment and evaluation understanding that aims to evaluate learning outcomes not only through cognitive products but also through performance indicators in the learning process. In this approach, the student's capacity to reproduce, transfer, and use information in different contexts comes to the fore. While traditional assessment tools (multiple-choice tests, short-answer exams, etc.) are functional in determining gains at the level of basic knowledge and comprehension, they may remain limited in measuring behaviors involving high-level mental processes such as problem-solving, critical thinking, decision-making, and creative thinking (Anderson & Krathwohl, 2001; Nitko & Brookhart, 2014). Therefore, contemporary assessment approaches bring performance-based and process-oriented evaluation tools more to the agenda.

The question, one of the fundamental components of active learning environments, is a strategic tool that activates the learner's cognitive activity. The quality of the question determines which level of the thinking process the student will be directed toward. Appropriately structured questions trigger high-level mental operations such as analysis, synthesis, and evaluation, increasing the student's active participation and supporting meaningful learning (King, 1995). In this context, asking questions is not just a technique that functions as a knowledge check, but also a pedagogical intervention that structures learning.

The process of preparing effective questions has the quality of a cognitive strategy. This is because the teacher performs conceptual analysis, considers cognitive levels, and designs the assessment tool according to a certain thinking stage while constructing questions suitable for learning goals. In this respect, the question-writing process requires high-level thinking (Brookhart, 2010). Furthermore, asking questions also performs a metacognitive function to the extent that it allows the student to monitor and regulate their own thinking process. Through the qualified questions directed at them, the student realizes what they know or do not know, reviews their thinking strategies, and can regulate their learning (Schraw & Moshman, 1995).

In contrast, research shows that questions in classroom applications remain largely at a low cognitive level. It is stated that a significant part of the questions asked by teachers is directed toward factual

information and the level of remembering, while questions requiring analysis, evaluation, and creative production are used to a limited extent (Temur& Aşık, 2023). This situation makes it difficult to measure and develop the high-level skills targeted in the instructional process.

The concept of high-level skill is defined as an upper category covering processes such as critical thinking, high-level cognitive processes, problem-solving, reasoning-based thinking, or creative thinking (Anderson & Krathwohl, 2001). Measuring these skills requires not only determining the correct answer but also evaluating the student's reasoning process, the form of justification, and the capacity for conceptual association. Therefore, developing teachers' question-writing competencies, diversifying assessment tools according to cognitive levels, and expanding performance-based evaluation applications are of critical importance for the formation of an assessment-evaluation culture compatible with the goals of contemporary instructional programs.

One of the most effective theoretical frameworks developed to classify cognitive skills systematically and make them measurable is Bloom's Taxonomy. The original taxonomy, developed under the chairmanship of Benjamin Bloom, was designed as a multi-layered model involving the classification of intellectual skills within the context of six cognitive difficulty processes (Bloom et al.,1956). This model envisages learning outcomes to be handled within a sequence of mental operations progressing from simple to complex. In the original classification, low-level cognitive processes were determined as knowledge, comprehension, and application; high-level processes were determined as analysis, synthesis, and evaluation. Due to the hierarchical structure, each upper stage assumes that the cognitive operations in the lower stages have been performed. Therefore, a student performing tasks at the application level is considered to have realized the knowledge and comprehension levels.

The fundamental function of the taxonomy is to ensure that instructional goals are clearly defined and assessment tools are structured in accordance with these goals (Krathwohl, 2002). This model, used for many years as a reference point in the development of instructional programs and the preparation of exam questions, has provided teachers with a systematic framework to lead their students to higher intellectual skills (Anderson & Krathwohl, 2001). However, the transformation experienced in the forms of information production and use in the 21st century necessitated the reconceptualization of cognitive processes (Trilling & Fadel, 2009).

In this direction, the taxonomy was updated and transformed into a two-dimensional structure by a working group chaired by Lorin Anderson and David Krathwohl (Anderson & Krathwohl, 2001). The revised model provided a more analytical classification by separating the "knowledge dimension" (factual, conceptual, procedural, and metacognitive knowledge) and the "cognitive process dimension." At the terminological level, the names were transformed into verb forms; thus, the aim was to define learning outcomes through observable performance indicators (Krathwohl, 2002).

In the revised taxonomy, the cognitive process dimension is structured as follows:

1. Remembering: Retrieving relevant knowledge from long-term memory. It includes the subcategories of recognizing and recalling.
2. Understanding: Determining the meaning of instructional messages, including oral, written, and graphic communication. It covers sub-skills such as interpreting, exemplifying, classifying, summarizing, inferring, comparing, and explaining.
3. Applying: Carrying out or using a procedure through performing or implementing.
4. Analyzing: Breaking material into constituent parts and detecting how the parts relate to one another and to an overall structure or purpose. It includes the sub-dimensions of differentiating, organizing, and attributing.
5. Evaluating: Making judgments based on criteria and standards. The subcategories of checking and critiquing are located at this level.
6. Creating: Putting elements together to form a novel and functional whole; reorganizing elements into a new pattern or structure. It involves generating, planning, and producing (Anderson & Krathwohl, 2001).

In the revised taxonomy, replacing the synthesis stage with the "creating" level reflects the emphasis on the importance of productivity and original design in the information age (Forehand, 2010). This change aims for students not only to reorganize existing information but to put forward new and functional wholes. Thus, the taxonomy provides a more functional framework for measuring high-level cognitive processes such as critical thinking, problem-solving, and creative production (Brookhart, 2010).

The updated structure of the taxonomy necessitates a balanced distribution of questions according to cognitive levels in assessment-evaluation processes. Research shows that questions directed toward high-level cognitive processes increase students' cognitive flexibility and transfer skills as much as their academic success (Haladyna, 1999; Nitko & Brookhart, 2014). In this context, Bloom's Taxonomy and its revised model are considered not only for the classification of instructional goals but also as a design tool to raise pedagogical quality.

In conclusion, the systematic measurement of cognitive skills and the integration of high-level thinking processes into the instructional process become possible through taxonomic frameworks. The Revised Bloom's Taxonomy provides a comprehensive model that grounds the critical, analytical, and productive thinking skills required by the contemporary educational understanding at both conceptual and applied levels.

Purpose of the research

This research aims to evaluate the assessment tools included in the Philosophy 11th Grade Skill-Based Activity Book, which was prepared by the Ministry of National Education (MoNE) in accordance with the new generation assessment and evaluation approach. The assessment tools within this skill-based activity book are taken as the primary criteria for evaluation. Bloom's Revised Taxonomy (BRT) will be utilized to determine the cognitive process dimension of these tools.

Methodology

This research was conducted based on interpretive paradigm and systematic analysis variant of systematic review design within the scope of qualitative research methods. Systematic analysis is a method involving the collection, analysis, and interpretation of written and digital materials containing data related to the research problem (Bowen, 2009). In this method, the researcher treats existing documents as primary data sources and analyzes their content, structure, and contextual characteristics in line with specific theoretical criteria (Karasar, 2024).

During the research process, access was provided to all assessment tools within the skill-based activity book, and the data set was formed in its entirety. Every question in the study was examined individually, and each was treated as an independent unit of analysis. Purposive sampling approach was used.

In conclusion, this study constitutes a theoretically grounded systematic analysis of the documents in which all questions in the skill-based activity tool are examined comprehensively and systematically. The research process is based on a holistic rather than a selective examination, providing a comprehensive and technical evaluation of the cognitive structures of the assessment tools.

Sampling

The Philosophy 11th Grade Skill-Based Activity Book, prepared by the Ministry of National Education and provided for the use of 11th-grade students, constitutes the primary data source of this research. The assessment tools related to 21 learning outcomes defined within the scope of 5 units and 55 topics in the book were included in the research.

In this direction, a total of 155 skill-based assessment tools developed by philosophy teachers for the relevant learning outcomes were examined in detail. Each assessment tool was handled individually; the

question stems, instructions, the measurement format used (open-ended, multiple-choice, structured response, etc.), the targeted cognitive process level, and the relationship established with the learning outcome were analyzed. Thus, both the compliance of the assessment tools with the outcomes specified in the curriculum and their distribution in terms of cognitive levels were systematically evaluated.

All research materials used in the study were obtained from digital documents published on the official website of the Ministry of National Education. No sampling method was employed in the data acquisition process; all assessment tools in the book were accepted as the study population and analyzed holistically. In this regard, the research bears the character of a census based on comprehensive document analysis.

Data collection

All research materials used in the study were obtained from digital documents published on the official website of the Ministry of National Education. The Philosophy 11th Grade Skill-Based Activity Book was downloaded and examined in its entirety. Access was provided to all assessment tools within the book, and the data set was formed without exclusion.

Every question in the activity book was accepted as a document to be analyzed. The question stems, instructions, response formats, and curriculum-related contextual elements were systematically reviewed and recorded for analysis

Ethics statement

The Philosophy 11th Grade Skill-Based Activity Book examined in this study was downloaded and reviewed from the publicly and freely accessible address of the Ministry of National Education's website (https://ogmmateryal.eba.gov.tr/panel/upload/etkilesimli/kitap/beceri_temelli/11/felsefe/index.html, Access Date: 25.03.2024). Therefore, ethics committee approval was not required. All processes of the research were carried out in accordance with ethical rules.

Rigor

In this research, validity and reliability were handled in line with the qualitative research paradigm and evaluated beyond the classical quantitative understanding of reliability. In ensuring validity and reliability, the criteria of credibility, transferability, dependability, and confirmability put forward by Lincoln and Guba (1985) were taken as a basis.

To increase the credibility of the research, the analysis process was structured clearly and systematically. The cognitive process dimension of Bloom's Revised Taxonomy was used as the theoretical framework; coding criteria were determined before the analysis, and each question was evaluated according to these criteria. Questions were classified not only according to superficial action verbs but by considering the type of cognitive operation, level of reasoning, and depth of mental demand expected from the student. Thus, it was aimed to prevent superficial classification errors. The coding process was carried out independently by the researcher and two subject matter experts; questions evaluated differently were discussed until a consensus was reached. This practice contributed to the purification of the analysis process from subjective interpretations.

To ensure the dependability of the research, all methodological processes were reported in detail. The nature of the data source, the unit of analysis, the coding process, decision-making criteria, and classification principles were clearly defined. This detailed description increases the replicability of the study by other researchers in a similar manner. Inter-coder reliability was calculated with the formula suggested by Miles and Huberman (1994). As a result of the calculation, the reliability coefficient was found to be .91. Considering that values of .80 and above are accepted as sufficient, this ratio indicates that the coding process is highly consistent.

The confirmability of the research was ensured by basing the findings directly on the documents and justifying the interpretations based on the data. Coding decisions were systematically recorded and compared with expert evaluations. Thus, an effort was made to minimize the effect of researcher subjectivity.

The transferability of the study was supported by a detailed description of the research context. The nature of the document examined, the grade level, the number of units and learning outcomes, and the number of assessment tools were clearly stated. These detailed contextual explanations offer the possibility of comparison and interpretation for future research on similar instructional materials.

Data analysis

The data analysis in this research was carried out within the framework of the documents by using systematic content analysis techniques. Systematic analysis is the analysis written materials containing information about the phenomenon or phenomena intended to be researched (Bowen, 2009). Accordingly, the assessment tools examined within the scope of the research were analyzed using descriptive and categorical content analysis methods.

Within the scope of the research, an evaluation of the assessment tools under the heading of "activities" in the 11th Grade Philosophy Course Curriculum was performed. In the analysis process, not only the question texts but also the general objectives of each unit, the relevant learning outcomes, and the cognitive processes targeted by the activities were taken into account. Thus, the assessment tools were handled with a holistic approach in the context of the learning outcomes envisaged by the curriculum. This approach enabled the evaluation of the curriculum-assessment alignment (Anderson & Krathwohl, 2001).

The examined assessment tools were coded based on the Cognitive Process Dimension of Bloom's Revised Taxonomy (BRT). According to BRT, the cognitive process dimension consists of six basic stages: remembering, understanding, applying, analyzing, evaluating, and creating (Anderson & Krathwohl, 2001). During the coding process, each question was classified by considering:

• The action verbs used in the question stem,

• The type of mental operation expected from the student,

• The level of cognitive depth required by the question,

• The nature of the relevant learning outcome in the curriculum.

The coding process was conducted in two stages. In the first stage, all questions were subjected to pre-coding by the researcher. In the second stage, independent coding was performed by a subject matter expert on BRT; the resulting codes were compared, and items with consensus and disagreement were identified. The inter-coder reliability was calculated using the formula suggested by Miles and Huberman (1994).

It is stated in the literature that the stages in the cognitive process dimension of BRT exhibit a hierarchical structure, with a degree of difficulty progressing from lower-level cognitive operations to higher-order thinking skills (Amer, 2006). However, it is emphasized that this hierarchical structure does not contain rigid boundaries and that there may be transitions and overlaps between cognitive processes. Therefore, during the classification process, coding was not done based solely on superficial action verbs; the level of mental operation requested from the student was taken as the basis. Particularly, the soft transitions between the analyzing, evaluating, and creating stages were examined in detail, and controversial items were decided upon in line with expert opinion.

After the completion of the coding process, the number of questions falling into each cognitive level was calculated as frequency (f) and percentage (%) values and presented in tables. Through these

descriptive statistics, the cognitive levels at which the assessment tools were concentrated were revealed, and the extent to which they overlapped with the curriculum's goal of developing higher-order thinking skills was evaluated.

The findings were interpreted in terms of the alignment between the cognitive goals envisaged by the curriculum and the cognitive level distribution of the assessment tools; specifically, the extent to which higher-order thinking skills (analyzing, evaluating, creating) were represented in the assessment tools was discussed within an analytical framework.

Findings

In this section, the findings regarding the identification of the assessment tools in terms of the Cognitive Process Dimension of Bloom's Revised Taxonomy (BRT) are presented. The findings are illustrated through tables and graphs.

Table 1.

Classification of Assessment Tools in the 11th Grade Philosophy Activity Book According to the Cognitive Process Dimensions of BRT

Cognitive Process Dimension	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Total Number of Questions
1. Remembering	7	2	2	1	3	15
1.1. Recognizing	7	2	2	0	3	
1.2. Recalling	0	0	0	1	0	
2. Understanding	15	12	9	6	9	51
2.1. Interpreting	6	0	1	0	0	
2.2. Exemplifying	0	1	0	0	0	
2.3. Classifying	2	0	0	0	0	
2.4. Summarizing	0	0	0	1	0	
2.5. Inferring	5	8	3	0	8	
2.6. Comparing	2	2	2	2	0	
2.7. Explaining	0	1	3	3	1	
3. Applying	1	3	1	0	0	
3.1. Executing	0	3	1	0	0	
3.2. Implementing	1	0	0	0	0	
4. Analyzing	5	4	3	3	5	20
4.1. Differentiating	4	4	3	3	4	
4.2. Organizing	0	0	0	0	0	
4.3. Attributing	1	0	0	0	1	
5. Evaluating	3	2	3	3	0	11
5.1. Checking	2	2	2	0	0	
5.2. Critiquing	1	0	1	3	0	
6. Creating	4	3	2	1	3	13
6.1. Generating	4	2	2	1	3	
6.2. Planning	0	0	0	0	0	
6.3. Producing	0	1	0	0	0	
Total Number of Questions	**35**	**26**	**20**	**14**	**20**	**115**

A total of 115 assessment tools were examined within the scope of the research. The distribution of assessment tools across the cognitive process dimensions is as follows: remembering (f = 15, 13.0%),

understanding (f = 51, 44.3%), applying (f = 5, 4.3%), analyzing (f = 20, 17.4%), evaluating (f = 11, 9.6%), and creating (f = 13, 11.3%).This distribution indicates that the assessment tools are significantly concentrated in the understanding stage, which constitutes approximately 44% of the total. Conversely, the applying stage is represented by a limited rate of 4%, pointing to a significant imbalance among cognitive processes.

Structural Analysis of Cognitive Process Stages

The majority of the assessment tools in the remembering stage were coded in the "recognizing" sub-dimension. The limited representation of "recalling" suggests that students are expected to perform selective recognition rather than free recall. In the understanding stage, a significant portion of the tools is clustered under "inferring." This finding shows that the tools prioritize establishing relationships between concepts and revealing implicit meanings. However, the limited representation of sub-dimensions like summarizing and classifying indicates an uneven distribution of cognitive diversity within this level.

The applying stage is the weakest in terms of both frequency and sub-dimension diversity. Almost all tools fall under "executing," while "implementing" is nearly non-existent. This suggests that while there is a demand for processing information within specific procedures, the cognitive demand for transferring knowledge to new and original situations remains very limited. In the analyzing stage, the majority of tools are clustered under "differentiating," with no tools found in the "organizing" sub-dimension. This shows that students are expected to break a text or argument into its components but are not required to reconstruct the structural relationships between these components.In the evaluating stage, most tools are in the "checking" sub-dimension, while "critiquing" has more limited representation. Finally, in the creating stage, most tools were coded as "generating," while "planning" was never encountered. This suggests that the procedural and strategic dimensions of creative thinking are not sufficiently included, and the level of creating is narrowed down to merely producing a specific product.

Overall Trend in Lower and Higher-Order Skills

When remembering, understanding, and applying are considered lower-order skills, and analyzing, evaluating, and creating are considered higher-order skills within the BRT framework, it is observed that 62% of the assessment tools correspond to lower-order processes, while 38% correspond to higher-order processes. However, qualitative analysis reveals that the higher-order categories remain limited in terms of sub-dimension diversity. Specifically, the absence of "organizing" in analysis and "planning" in creating indicates that the structural integrity of higher-order cognitive processes is not fully represented in the assessment tools.

Discussion

In this study, the questions developed by the Turkish Ministry of National Education (MoNE) within the framework of the skill-based assessment approach were analyzed based on the cognitive process dimension of the Revised Bloom's Taxonomy (BRT). The findings reveal a structural misalignment between the policy-level emphasis on higher-order thinking skills and the actual cognitive demands reflected in assessment practices. This discrepancy reflects a broader issue frequently discussed in recent educational reforms in Türkiye, particularly in relation to the transition toward competency-based curricula (MoNE, 2023).

Interpretation of Findings within the Theoretical Framework

From the perspective of Messick's (1995) unified theory of construct validity, an assessment instrument should adequately represent the theoretical construct it claims to measure. Skill-based assessment, by definition, encompasses higher-order cognitive processes such as analyzing, evaluating, and creating.

However, the findings indicate that these processes are either underrepresented or entirely absent. This leads to a construct underrepresentation problem, thereby weakening the validity of the assessment practices.

Similarly, Stein and Smith (1998) argue that the level of cognitive demand is determined not by the contextual richness of a task but by the type of mental operations required from students. In line with this argument, although many items analyzed in this study are embedded in rich textual contexts, they predominantly require lower-level processes such as recalling or making explicit inferences. This suggests that contextual complexity has been mistakenly equated with cognitive depth. Recent studies on digital and text-based assessment practices also emphasize that surface-level complexity does not necessarily translate into deeper cognitive engagement (Ercan & Çıldır, 2022; OECD, 2021).

Pedagogical Interpretation of Cognitive Imbalance

One of the most striking findings of the study is the concentration of items within specific sub-dimensions, particularly "making inferences," and the complete absence of others such as "organizing" and "planning." This imbalance can be interpreted from multiple pedagogical perspectives.

First, lower and mid-level cognitive processes are generally easier to operationalize and score in large-scale assessments (Popham, 2017). As a result, item writers may tend to favor these types of questions due to practical constraints. Second, the dominance of high-stakes examinations within the Turkish education system may reinforce a preference for easily measurable outcomes, thereby discouraging the inclusion of complex cognitive tasks (Kumandaş & Kutlu, 2014).

Findings from studies conducted in Türkiye on textbook analyses and assessment practices also support this pattern. Research indicates that instructional materials across different subject areas tend to emphasize lower-order cognitive skills, with limited representation of higher-order thinking processes (Çepni et al., 2001; Demir & Dinar, 2006). Therefore, the imbalance identified in this study may reflect a systemic tendency rather than a subject-specific issue.

However, from the perspective of philosophy education, this imbalance is particularly problematic. Philosophy inherently requires students to construct arguments, organize their thoughts coherently, and engage in reflective and critical inquiry. As emphasized by Lipman (2003), philosophical inquiry is fundamentally linked to reasoning, questioning, and structured thinking. The absence of "organizing" and "planning" sub-dimensions indicates that students are not being assessed on their ability to develop structured philosophical arguments. Consequently, assessment practices may reduce philosophy education to recognizing or reproducing ideas rather than producing and evaluating them.

Evaluation of Instructional-Assessment Alignment

According to Biggs' (1996) theory of constructive alignment, effective teaching requires consistency between learning outcomes, instructional activities, and assessment methods. The findings of this study suggest that such alignment has not been fully achieved. Although the curriculum emphasizes higher-order thinking skills, these are not sufficiently reflected in assessment tools.

Recent research on curriculum implementation in Türkiye highlights similar inconsistencies between intended and implemented curricula, particularly in the context of competency-based education reforms (Ercan & Çıldır, 2024; MoNE, 2023). This suggests that the issue extends beyond item-writing techniques and reflects a broader systemic challenge.

Achieving true alignment requires coordinated efforts across multiple components of the educational system, including curriculum design, textbook development, teacher training, and assessment practices. Without such systemic coherence, the goal of fostering higher-order thinking skills is unlikely to be realized in practice.

Implications for Philosophy Education

The findings of this study have direct implications for philosophy education. The limited representation of higher-order cognitive processes restricts students' opportunities to engage in essential philosophical practices such as argument construction, critical evaluation, and reflective thinking.

In particular, the absence of "organizing" and "planning" dimensions is critical. These processes are central to philosophical writing and reasoning, as they enable students to structure arguments, justify claims, and engage in disciplined thinking. Their exclusion from assessment practices may lead to a narrowing of the curriculum and a superficial engagement with philosophical content.

Moreover, recent discussions on 21st-century skills and digital literacy emphasize the importance of higher-order thinking competencies such as problem-solving, critical thinking, and metacognition (OECD, 2021; Voogt & Roblin, 2012). The findings of this study suggest that current assessment practices may not adequately support the development of these competencies within philosophy education.

Conclusion and Recommendations

In conclusion, the cognitive process distribution of the analyzed questions does not fully align with the higher-order thinking goals emphasized in policy documents. A significant proportion of the items remains concentrated in lower-level cognitive processes, indicating a gap between the intended and implemented curriculum.

To address this issue, several recommendations can be proposed. First, assessment designers should be supported with clear guidelines and professional development opportunities focused on developing higher-order cognitive items. Second, textbooks and instructional materials should incorporate more activities that require organizing, planning, and argumentation. Third, teacher education programs should emphasize the integration of higher-order thinking skills into both instruction and assessment processes.

Ultimately, establishing a sustainable skill-based assessment approach requires a comprehensive and systemic alignment among curricula, instructional practices, and assessment tools. Without such alignment, the discrepancy between the rhetoric and practice of assessment is likely to persist.

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Conflicts of interest

No conflicts of interest are declared by the author.

Author Contribution

Corresponding author Mustafa Sekban: Conceptualization, data refinement, research, methodology, original drafting, review, and editing.

Güçlü Şekercioğlu: Supervision, writing-reviewing and editing

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Ethics Approval

In the writing process of the study titled **" Alignment of the Turkish 11th grade philosophy skill-based activity book with Bloom's revised taxonomy**", scientific, ethical and citation rules were followed; It is committed by the author of this study that no falsification has been done on the data collected. It accepts that "Journal of Action Qualitative &; Mixed Methods Research and Editor" has no responsibility for all ethical violations that may be encountered, that all responsibility belongs to the author and that the study has not been submitted to any other academic publication environment for evaluation.

Institutional review board (IRB) approval

Institutional Review Board (IRB) is not required for this research.

Data Availability Statement

Anonymized data from this study can be used upon request sekbanmustafa@hotmail.com