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Teachers' Perceptions of Questioning Practices Based on Bloom's Taxonomy in Gifted Education

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Abstract

This study, which examines the questioning skills of teachers working at BİLSEM (Science and Art Center), was designed according to the qualitative research model. Conducted using the case study design, one of the qualitative research methods, the participants of the study consisted of 8 female and 11 male teachers from different branches working in BİLSEMs located in various cities of the Central Anatolia Region. In the research, where data were collected through interviews, a semi-structured interview form developed by the researchers was used as the data collection tool. The obtained data were analyzed using content analysis. The teachers stated that higher-order questions would develop creativity in students, help them think deeply, reveal their potential, and should be utilized; furthermore, they expressed that the questions posed to gifted students should support their multifaceted development and reveal different perspectives. In addition, while teachers largely cited teacher-related factors regarding the reasons for difficulties experienced in asking questions to gifted students, they generally noted that difficulties were encountered in asking questions appropriate to the level of gifted students. Regarding whether they needed any training in terms of questioning skills, the teachers largely expressed the opinion that there is a need for additional training.

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Introduction

Gifted individuals exhibit characteristics that distinctly differ from their peers in the areas of cognitive, social, and emotional development. Studies in the literature regarding the characteristics of these individuals indicate a consensus, particularly regarding the early emergence of cognitive abilities, rapid learning capacity, and advanced communication skills. Early research on children identified as highly gifted (or very highly gifted based on IQ test scores of 145 or higher reveals that these individuals have unique intellectual and social-emotional needs (Gross, 2003; Lubinski, 2016). On the other hand, while the concept of giftedness is defined in various

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ways in the literature, it is generally described as high performance in areas such as academic achievement, creativity, intrinsic motivation, and curiosity, based on the individual's superior intellectual capacity (Gottfredson, 2004; Ravenna, 2008; Reis & Renzulli, 2010). The Ministry of National Education (MEB, 2018), on the other hand, defines gifted individuals as those who learn faster than their peers, possess high levels of creativity and leadership capacity, are capable of abstract thinking, and demonstrate high performance in specific areas.

The fact that these individuals' cognitive capacities are at a more advanced level than their peers makes it difficult for them to adapt to standard educational programs. Traditional instructional programs fall short of meeting the needs of gifted students; this situation can lead to students becoming bored and losing motivation (Ataman, 2008; Reis & Morales-Taylor, 2010). Additionally, the asynchronous developmental characteristics observed in cognitive, social, and emotional domains increase the need for these individuals to receive differentiated educational interventions (Renzulli & Reis, 1985). Therefore, in the education of gifted individuals, the development of specialized educational programs that take into account their interests, needs, and potential is of great importance. It is emphasized that the educational services provided in this context should be structured in line with the objectives of unlocking the individual's potential, contributing to society, and supporting creative production (Altun & Vural, 2012; Ataman, 2008). Indeed, Renzulli (2011) notes that education for gifted individuals is based on three fundamental assumptions: developing the individual's potential, generating solutions to social problems, and linking learning processes to higher-order thinking skills.

When examining the cognitive, social, and emotional characteristics of gifted individuals, it becomes clear that these individuals cannot be fully supported by standard educational programs alone. In particular, their ability to learn quickly, think deeply, and possess a high cognitive capacity demonstrates that they require differentiated and enriched educational environments. In this context, educational processes must be restructured to align with the individual characteristics of gifted individuals so that they can develop their potential to the fullest. Therefore, approaches to the education of gifted individuals should be based on their specific characteristics and planned accordingly to maximize their potential.

Gifted Individuals and Their Education

Education for gifted students aims to meet these individuals' unique learning needs and provide advanced learning opportunities. Developing students' creative and critical thinking skills is one of the primary objectives of this process. One of the most effective approaches to achieving these goals is differentiated instruction, which involves adapting teaching methods, content, and assessment processes to students' readiness, interests, and strengths (Roberts & Inman, 2023; Tomlinson, 2017). Differentiation has long been recognized as a fundamental approach in the education of gifted students, enabling educators to create learning environments that are richer, more flexible, and intellectually stimulating (Passow, 1982).

Gifted students are typically individuals who learn more quickly than their peers and possess advanced cognitive abilities. Therefore, differentiated instruction supports their continuous development by ensuring they are challenged at an appropriate level without becoming overwhelmed, thereby contributing to the development of their lifelong learning skills. Additionally, personalizing learning experiences helps students explore their interests more deeply, effectively utilize higher-order thinking skills, and engage in meaningful interactions with their peers (Roberts & Inman, 2023; Tomlinson, 2017). However, implementing differentiated instruction also presents various challenges for teachers. In particular, preparing appropriate content and materials for different student groups, as well as planning and implementing the instructional process, requires a significant amount of time and resources. The primary challenges teachers face, as identified in the literature, include time constraints, lack of resources, limited training in differentiation, classroom management concerns, and a lack of administrative support (Ginja & Chen, 2020; Roberts &

Inman, 2023; Rubenstein et al., 2015). This situation makes it difficult for teachers to effectively plan and implement differentiated instruction (Akdeniz et al., 2025).

When examining practices related to the education of gifted individuals in Turkey, it is evident that efforts in this field date back to the 1960s. During this period, special classes were established, and support services for gifted individuals were also developed. Science and Art Centers (BİLSEM), which began with pilot programs in 1997, have since spread nationwide and play a significant role in the education of gifted students (Ataman, 2008; Dağlıoğlu & Suveren, 2013). BİLSEMs provide educational environments that enable students to develop their individual talents during their time outside school (Dağlıoğlu, 2010). In these centers, students receive education through phased programs such as adaptation, support education, identifying individual talents, developing special talents, and project management (MEB 2023).

The rapid changes occurring in the information age have led to a redefinition of the functions expected from educational systems. Today, education systems aim to equip students with the skills to access information, analyze it, and generate new knowledge rather than merely imparting ready-made knowledge. In this context, it is no longer considered sufficient for individuals to merely possess knowledge; they are also expected to use this knowledge to solve problems and develop critical and creative thinking skills (Akpınar & Aydın, 2010). Research indicates that thinking skills are developable (Güneş, 2012) and that these skills must be systematically monitored and assessed (Doğan, 2019). However, one of the significant challenges teachers face is effectively cultivating these higher-order thinking skills (Chidozie et al., 2014). The development of higher-order thinking skills requires a holistic approach to teaching, learning, and assessment processes (Birenbaum, 2003, cited in Barak & Dori, 2009). In this context, asking questions emerges as one of the most effective tools for developing thinking skills among students. Questions used in educational processes stimulate students' thinking, enabling them to construct knowledge and develop different perspectives. Effective questioning enhances students' curiosity and deepens their learning. For this reason, teachers' questioning skills are considered one of the fundamental elements determining the quality of the teaching process (Büyükalan Filiz, 2009).

Bloom's Taxonomy and Inquiry in The Education of Gifted Individuals

Asking questions is recognized as a fundamental tool that triggers learning and thinking processes. An individual's ability to effectively utilize their mental processes is largely related to the quality of the questions they pose. Learning becomes deeper and more meaningful through questions; often, an individual's ability to begin thinking about a subject is made possible by asking questions. The development of scientific thinking is similarly shaped by the process of seeking answers to questions that arise in one's mind (Çalışkan, 2011). Therefore, educational settings should prioritize high-quality questions that stimulate students' thinking processes and guide them toward analysis and interpretation rather than superficial, rote-learning-based questions. Indeed, logical, consistent, and interconnected questions enable individuals to restructure their knowledge, thoughts and judgments (Özden, 2003).

In the education of gifted students, the process of asking questions takes on even greater critical importance. These students learn more effectively in learning environments that require them to encounter complex problems, develop different perspectives, and generate creative solutions. Indeed, research indicates that teachers can provide richer and more in-depth learning experiences by posing complex questions, encouraging creative responses, and supporting critical thinking (Chen et al., 2017; Lo & Feng, 2020; Salmon & Barrera, 2021; Schwartz et al., 2016; Wang et al., 2023; VanTassel-Baska, 2014). In this context, Bloom's taxonomy provides an important theoretical framework that supports students in thinking at different cognitive levels. Differentiating learning experiences based on Bloom's taxonomy is considered an effective approach, particularly in addressing the needs of gifted students (Roberts & Inman, 2023). Educators can use this framework to design activities at different cognitive levels using the same content and systematically develop students' critical thinking and problem-solving skills (Bloom, 1969; Scott, 2014). Bloom's revised taxonomy, on

the other hand, addresses cognitive processes across six levels: remembering, understanding, applying, analyzing, evaluating, and creating (Anderson et al., 2001). These levels are divided into two main groups: lower-order thinking skills (remembering, understanding, applying) and higher-order thinking skills (analyzing, evaluating, creating) (Akdeniz et al., 2025). Considering the learning characteristics of gifted students, it is observed that these individuals are particularly successful in learning environments that require higher-order thinking skills (VanTassel-Baska, 2014). Therefore, in differentiated instruction practices, it is of great importance to include questions that encourage students to think at the levels of analysis, evaluation, and creation (Roberts & Inman, 2023; Santangelo & Tomlinson, 2012).

A review of the existing literature reveals that the questions used in educational processes are largely concentrated at the lower levels of Bloom's taxonomy (remembering, understanding, and applying); in contrast, questions targeting higher-order cognitive skills such as analyzing, evaluating, and creating remain quite limited (Akdeniz et al., 2025; Filiz, 2009; Yeşil, 2008; Yeşil & Özbek, 2008). Similarly, studies focusing on teachers' question-writing skills also reveal that the proportion of lower-level questions is higher compared to higher-level questions (Anasy, 2016; Freahat & Smadi, 2014; Igbaria, 2013; Khan & Inamullah, 2011; Raqqad & Ismail, 2018; Razmjoo & Kazempourfard, 2012; Ulum, 2016; Zaiturrahmi et al., 2017). Indeed, a study by Utami and others (2019) also found that more than half of the questions prepared by teachers were at the comprehension level; it was determined that questions requiring higher-order cognitive processes were quite limited. However, existing studies indicate that while teachers are aware of the importance of questions targeting higher-order cognitive skills, this awareness does not sufficiently translate into classroom practices. Indeed, significant discrepancies were found between teachers' beliefs regarding question-asking and their classroom practices, and it was determined that questions at the analysis, evaluation, and creation levels were used only to a limited extent (Soysal, 2026). Furthermore, although teachers possess conceptual knowledge of Bloom's taxonomy, it is reported that they face difficulties in classifying questions according to taxonomic levels and in the process of creating higher-order questions (Uysal, 2025). On the other hand, despite the decisive role of questioning skills in students' critical thinking, problem-solving, and deep learning processes, it is emphasized that teachers largely rely on closed-ended and lower-level questions, and that this situation limits students' cognitive development (Domu et al., 2023; Soysal, 2026). The limited number of studies conducted specifically in the context of gifted students reveal that while teachers are aware of the importance of higher-order questions, they face significant difficulties in the processes of structuring these questions, linking them to appropriate cognitive levels, and adapting them to student characteristics. When these findings are evaluated together, it is evident that existing studies largely focus on determining the cognitive levels of questions; however, teachers' perceptions of the question-asking process, their classroom implementation practices, the challenges they face, and their educational needs have not been addressed through a holistic approach. The limited number of studies examining this multidimensional structure, particularly in the context of educating gifted students, points to a significant gap in the literature. In this regard, the present study aims to comprehensively examine teachers' Bloom's taxonomy-based question-asking processes for gifted students across the dimensions of perception, application, encountered difficulties, and professional development needs. In this regard, it is anticipated that the study will not only enhance teachers' awareness of their questioning skills but also contribute to the development of more high-quality and enriched learning environments that support the higher-order thinking skills of gifted students. In pursuit of this objective, the research sought to answer the following questions:

1. What are teachers' perceptions and evaluations regarding the use of Bloom's taxonomy in the education of gifted students?
2. Which cognitive levels (Bloom's stages) do teachers consider when asking questions to gifted students, and what approach do they adopt in this process?

3. What challenges do teachers face when creating higher-order (analysis, evaluation, creation) questions for gifted students?
4. What are teachers' views on their training needs to improve their questioning skills, and in which areas do these needs concentrate?

Method

Research Model

This study, which examines the questioning skills of teachers working at BİLSEM, was designed according to the qualitative research model. Qualitative research is a model that includes data collection tools such as observation, interview, and document analysis, and enables the holistic collection of individuals' perceptions of a subject within their natural environment (Yıldırım & Şimşek, 2021). In the qualitative research process, the aim is to make sense of how people, placed at the center, define events and phenomena occurring within their social environment. The method focuses on explaining the case under scrutiny in an interpretive way and without detaching it from its context, adopting a holistic perspective (Cropley, 2022). In the research process, the case study method, one of the qualitative research types, was preferred. Case study focuses on the detailed and in-depth investigation of one or more cases that may be encountered in real life (Creswell, 2014). In this context, semi-structured interview questions were prepared in accordance with the nature of the case study method in order to determine participants' perceptions in depth.

The main reason for choosing the case study design in this research is to examine in depth, within its natural context, the perceptions, experiences, and evaluations of BİLSEM teachers working with gifted students regarding questioning processes based on Bloom's Taxonomy. Rather than measuring teachers' questioning skills, the aim of the research is to present a comprehensive perspective on their views regarding this process, the challenges they face, and their professional development needs. In this regard, the case study design is consistent with the aim of the research, as it enables the detailed examination of the phenomenon under investigation without detaching it from its real-life context.

This research was ethically appropriate for Necmettin Erbakan University The Social and Human Sciences Scientific Research Ethics Committee dated 07/02/2025 and numbered 2025/81. The research process was based on the voluntary nature of the participants, and the principles of confidentiality and anonymity were observed. Informed consent was obtained from the participants before they were included in the study, and the data obtained were used solely for scientific purposes. Furthermore, care was taken to ensure that no participant was harmed during the research process, that their rights were protected, and that data security was maintained.

Researcher Identity and Position

The research team comprised an associate professor working in the field of gifted education and two doctoral students. All team members have experience working with and conducting research on gifted individuals in Japan. Accordingly, the team believes that the individual differences of gifted students must be taken into account and that students have the right to benefit from appropriate educational environments and supportive practices to realize their potential.

During the research process, team members gathered during the data analysis phase to jointly evaluate the findings; in this process, they engaged in discussions regarding their own perspectives, values, and potential biases. Thus, the goal was to achieve more objective and consistent results in the analysis.

Study Group

The study group consisted of 19 subject teachers working at BİLSEM centers in various cities across Central Anatolia during the 2025–2026 academic year. The purposive sampling method commonly used in qualitative research was employed to select teachers to participate in the study. The goal was to include participants who best represented the situation under investigation. Additionally, to ensure maximum diversity in the selection of the study group, care was taken to include teachers from different subject areas, age groups, genders, levels of professional experience, and educational institutions in the study. Demographic information regarding the study group is provided in Table 1.

Table 1: Demographic information of the teachers

	Subject	Age	Gender	Years of Professional Experience
Grade 1	Science	48	Male	28
Grade 2	English	36	Male	12
Grade 3	English	39	Female	9
Grade 4	Technology Design	38	Male	14
Grade 5	Turkish	37	Female	8
Grade 6	Biology	37	Male	15
Grade 7	Social Studies	35	Female	10
Grade 8	Class Teacher	37	Female	15
Grade 9	Visual Arts	47	Women	25
Grade 10	Mathematics (Middle School)	44	Male	20
Grade 11	Social Studies	45	Male	17
Grade 12	English	45	Male	12
Grade 13	Science	38	Female	13
Grade 14	Mathematics (High School)	32	Female	11
Grade 15	English	37	Male	15
Grade 16	Class Teacher	41	Female	19
Grade 17	Mathematics (High School)	32	Male	11
Grade 18	Mathematics (High School)	40	Male	18
Grade 19	Visual Arts	45	Male	20

Data collection tools

A semi-structured interview form was used to collect data during the research process. During the preparation of the interview questions, domestic and international literature was first reviewed (Akdeniz et al., 2025; Filiz, 2009; Yeşil, 2008; Yeşil & Özbek, 2008), and subsequently, a pool of 4 questions was created based on the information obtained. This question pool was presented to two faculty members and two experts working in the field of gifted education, and minor revisions were made (e.g., rearranging the order of questions; improving the wording of a question). As a result of this process, the semi-structured interview form, consisting of four items, was finalized in accordance with the experts' feedback. To test the clarity and feasibility of the interview form, a pilot study was conducted with two teachers employed at BİLSEM. Based on the feedback received from the teachers following the pilot study, it was determined that the questions were clear, understandable, and linguistically appropriate; therefore, no further changes were deemed necessary, and the main application process proceeded as planned. The interview questions posed to the participants within the scope of the research are presented below:

1. What are your views on the use of Bloom's taxonomy in the education of gifted students?
2. What types of questions do you prefer when asking gifted students? Do you consider the levels of Bloom's taxonomy when creating these questions?
3. What difficulties do you encounter when preparing questions that develop higher-order thinking skills (analysis, evaluation, creation) for gifted students?
4. Do you feel any need for training to improve your questioning skills?

During the interview process, the discussion was not limited to basic questions; follow-up (probing) questions were used to deepen participants' perspectives and gather more detailed data. In this context, teachers were asked questions such as, "At what level (recall, analysis, creation, etc.) do you typically ask questions?" and "What factors influence your choices?" to ensure that their responses were explained, clarified, and illustrated with examples. Through this process, the participants' general views and detailed experiences based on classroom practices were brought to light.

Data Collection and Procedures

All procedures carried out during the research process were conducted in accordance with the approval

obtained from the relevant ethics committee. Teachers who volunteered to participate in the study were provided with the necessary information about the study, and informed consent was obtained. Following the consent process, a demographic information form was administered to participants.

During the qualitative data collection process, face-to-face individual interviews were conducted with teachers at predetermined time intervals. To plan the interviews, a member of the research team contacted the participants to determine the suitable dates and times. All interviews were conducted using a set of pre-prepared, semi-structured interview questions. Prior to the interviews, the participants were briefly informed about the purpose and process of the study, and care was taken to establish trusting communication during the interview process. Each interview lasted an average of 30–35 minutes and was recorded using a voice recorder with the participants' consent. The resulting audio recordings were transcribed verbatim into written text and reviewed by the researchers to verify the accuracy of the dataset. This process was implemented to enhance data reliability.

Data Analysis

The content analysis method was used in analyzing the qualitative data obtained from the semi-structured interviews conducted with teachers. The analysis process began with the researchers reading the interview data multiple times to become familiar with it, followed by the coding phase. During the coding process, both the conceptual framework based on the literature and findings derived from the data were taken into account. Bloom's Taxonomy was not only used as a theoretical background but was also adopted as the conceptual framework guiding the interpretation of the data. In analyzing the teacher interviews, particular attention was paid to the cognitive processes included in Bloom's Taxonomy (remembering, understanding, applying, analyzing, evaluating, and creating) as well as statements regarding higher-order thinking skills. In the first stage, meaningful statements were identified from the data and initial codes were created based on these statements. The codes generated were then compared with relevant concepts from the literature, reorganized, and finalized. To ensure that the coding process was carried out systematically and consistently, a codebook was developed. The codebook included the definition, scope, and example statements for each code, thereby ensuring the consistent application of the codes. To enhance the reliability of the research, the data were coded independently by two researchers. Inter-coder agreement was calculated using the formula [Consensus / (Consensus + Disagreement) × 100] proposed by Miles and Huberman (1994). As a result of this calculation, the agreement rate was found to be 92%, and since this value is above 80%, the data analysis was considered reliable (Miles and Huberman, 1994). Differences of opinion between coders were discussed and a consensus was reached, and the coding process was concluded accordingly. After the coding process, codes with similar characteristics were grouped to form categories,

Table 2.: Example from the coding process

Participant Statement	Initial Code	Category	Theme
"I ask questions that students can reflect on."	Encouraging reflection	Enhancing cognitive processes	Question structures that support higher-order thinking and cognitive depth
"I ask questions that reveal different perspectives."	Different perspective	Creative and multidimensional thinking	Question structures that develop creativity and multidimensional perspectives
"It's difficult to prepare questions appropriate to the student level."	Inability to create student-level appropriate questions	Questioning skills	Difficulties arising from teacher competencies
"We need to receive training on this."	Need for training	Professional development requirement	Clarity of the need for training

and these categories were then organized under higher-level themes. During the theme development process, the integrity of the data was preserved and care was taken to ensure that each theme reflected the research questions.

As seen in Table 2, during the data analysis process, participant statements were first divided into meaningful units of data, and then initial codes were created. Codes with similar characteristics were grouped to form categories, and in the final stage, higher-level themes consistent with the research questions were developed. During this process, coding decisions were compared among the researchers and finalized through consensus.

Findings

Teachers' Views on the Role of Bloom's Taxonomy in the Education of Gifted Students

When examining teachers' views on the use of Bloom's Taxonomy in the education of gifted students, it is observed that this approach is addressed in three main dimensions: (i) contribution to cognitive and higher-order thinking skills, (ii) contribution to the learning-teaching process, and (iii) teachers' perceptions and level of awareness (Table 3).

The Contribution of Bloom's Taxonomy to Cognitive and Higher-Order Thinking Skills

An analysis of teachers' views revealed that Bloom's Taxonomy is regarded as a tool that most effectively develops higher-order cognitive processes in the education of gifted students. Participants particularly emphasized that the analysis, evaluation, and creation stages deepened students' thinking processes. In this context, teachers stated that Bloom's Taxonomy guides students not only toward acquiring knowledge but also toward restructuring knowledge, developing different perspectives, and producing original works. Notably, skills such as creative, multifaceted, and independent thinking come to the forefront in this process. One teacher described this situation as follows: *"Using the analysis, synthesis, and evaluation levels of Bloom's taxonomy is the right choice. Because at these levels, students strive to*

Table 3: Teachers' views on the use of Bloom's Taxonomy in the education of gifted students

Theme	Subtheme (Category)	Codes	f
Contribution to Cognitive and Higher-Order Thinking	Higher-order thinking skills	Encourages deep thinking	2
		Fosters independent thinking	2
		Fosters multifaceted thinking	1
		Develops creative thinking	6
Contribution to the Learning-Teaching Process	Supports the learning process	Helps with effective learning	1
		Enables rapid learning	1
		Reinforces learning outcomes	2
		Unlocks potential	3
		Provides guidance	1
	Supports thinking processes	Develops inquiry skills	1
		Facilitates rapid learning	1
		Reinforces learning	2
		Unlocks potential	3
		Provides guidance	1
	Supports thinking processes	Develops inquiry skills	1
		Helps with making comparisons	1
Perception and Awareness Level	Positive perception of the teacher	Should be used	5
		It is a useful method	1
	Lack of information	I don't know	2

engage in multifaceted thinking, make comparisons, and create something new as a creative act" (T8)

Similarly, another teacher emphasized that higher-order thinking skills are a critical requirement for gifted students: *"The final higher-order levels of Bloom's taxonomy—analysis, synthesis, and evaluation—are key to activating these critical skills. Higher-order thinking skills are among the essential competencies that must be utilized in the education of gifted students" (T14)*

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The Contribution of Bloom's Taxonomy to the Learning–Teaching Process

Research findings reveal that Bloom's taxonomy is viewed not only as a framework for cognitive processes but also as a structure that enhances the effectiveness of the learning-teaching process. Participants stated that this approach increases students' learning speed, makes learning more enduring, and plays a significant role in bringing out students' potential. Teachers also noted that Bloom's taxonomy serves a guiding function in the teaching process and contributes to a more systematic structuring of learning outcomes. This indicates that teachers have adopted Bloom's taxonomy not merely as a theoretical framework but also as a practical teaching tool. One teacher expressed this view as follows: *"Gifted students think more deeply and learn faster. Bloom's taxonomy can help these students reach their full potential. I believe it is effective in their education" (T19)*

Another teacher, however, emphasized the importance of the higher levels in practice: *"I think it will be beneficial. In schools, the recall and comprehension levels—and sometimes the application level—are used. But at BİLSEM, we often have the opportunity to analyze and evaluate; the creation level will be very beneficial when producing projects" (T13)*

Teachers' Views and Awareness Level Regarding Bloom's Taxonomy

Although the vast majority of teachers expressed positive views regarding Bloom's taxonomy, the findings indicate that the level of awareness regarding this approach is not homogeneous among teachers. While some participants did not express any views on Bloom's taxonomy, this points to a limited lack of knowledge. However, it is evident that positive perceptions of Bloom's Taxonomy predominate, and teachers generally evaluate this approach as a necessary, useful, and practical teaching tool. This finding suggests that while teachers largely embrace Bloom's taxonomy, there may be a need for more systematic support in terms of knowledge and application.

"I think it is necessary to use Bloom's Taxonomy especially in the education of gifted students. Because it provides significant guidance to teachers in developing students' levels of thinking and in conducting lessons in a more organized way." (Ö5)

When the findings in Table 3 are evaluated together, it is seen that teachers perceive Bloom's Taxonomy not only as a theoretical model that allows the classification of cognitive stages, but also as a teaching framework that guides the development of

higher-order thinking skills in gifted students. The fact that participants specifically emphasized the stages of analysis, evaluation, and creation indicates that Bloom's Taxonomy is considered a structure that increases cognitive depth and supports differentiated instructional practices in the education of gifted students. However, the expression of knowledge gaps about the taxonomy by some teachers points to an ongoing need for professional support in transferring this theoretical framework into practice.

Teachers' Views on Considerations When Asking Questions of Gifted Students

An examination of teachers' views on the process of asking questions to gifted students reveals that this process is approached from three main dimensions: (i) supporting higher-order thinking and cognitive depth, (ii) fostering creativity and a multidimensional perspective, and (iii) creating a question structure that is sensitive to student characteristics and individualized .

Question Structures Supporting Higher-Order Thinking and Cognitive Depth

Research findings indicate that teachers emphasize the need for questions directed at gifted students to have a structure that primarily activates and deepens cognitive processes. Participants stated that questions should encourage students to think, guide them toward making inferences, and ensure that they utilize higher-order cognitive skills. In this context, teachers noted that questions corresponding to the analysis, evaluation, and creation levels play a significant role in developing students' thinking processes. It was also emphasized that questions should not be based on superficial knowledge but rather be designed to encourage students to think deeply by paying attention to details. One teacher described it as follows: *"I make a point of asking questions that allow students to think, reason, and draw conclusions" (T13)*

Similarly, another teacher emphasized that questions should be far from rote memorization and should be constructive: *"Questions are expected to be designed in a way that allows students to express themselves, construct knowledge, and present their unique perspectives, rather than merely recalling or memorizing pre-existing information" (T8)*

Question Structures That Foster Creativity and a Multi-Dimensional Perspective

The findings reveal that teachers adopt an approach in the questioning process that supports cognitive depth, creativity and multifaceted thinking. Participants stated that questions must be structured in this manner to enable gifted students to develop diverse perspectives and generate original ideas. In this context, teachers emphasized that questions must allow students to use their imagination, generate alternative solutions, and evaluate events from different angles. This indicates that the questioning process is viewed not merely as a tool

Table 4: Teachers' views on key considerations when asking questions of gifted students

Theme	Subtheme (Category)	Codes	f
Question Structure Supporting Higher-Order Thinking and Cognitive Depth	Developing cognitive processes	Should encourage thinking	5
		Should facilitate drawing conclusions	4
		Should include higher-order questions	2
		It should take details into account	1
Question Structure That Develops Creativity and a Multi-Dimensional Perspective	Creative and multifaceted thinking	Should foster a different perspective	8
		Should encourage creativity	3
, and Individualized Question Structure Sensitive to Student Characteristics	Suitability and development for the student	Should support holistic development	9
		Must take the student into account	4
		It should take their interests into account	3
		Ensure open communication	1

for measuring knowledge but also as a process that triggers creativity. One teacher expressed this view as follows: *"I make sure the questions aren't simple and instead focus on more complex and in-depth ones. I prefer questions that bring out different perspectives. I ask questions that allow them to use their creativity and strive to bring out their original thinking skills" (T15)*

Question Structure Sensitive to Student Characteristics and Individualized

Research findings indicate that teachers believe it is important to consider students' individual characteristics during the question-asking process. Participants emphasized the need to consider gifted students' interests, developmental levels, and individual differences. In this context, teachers emphasized that questions should be structured to bring out the student's potential, support their multifaceted development, and ensure the student's active participation. It was also noted that the questioning process should have a structure that supports open communications. One teacher explained this as follows: *"I pay attention to details because they capture them so well. I also want them to interpret things in their own way. I want to see their suggestions or how they evaluate something they've observed, and what conclusions they draw based on their own imagination" (T1)*

When the findings presented in Table 4 are evaluated collectively, it is evident that teachers believe questions directed at gifted students should not be limited to measuring only knowledge level; rather, they should be structured to deepen students' thinking processes, foster the development of different perspectives, and support the generation of original ideas. The participants' particular emphasis on inference making, developing alternative solutions, supporting creativity, and considering students' individual characteristics demonstrates that they adopt a questioning approach consistent with the higher-order cognitive processes defined in Bloom's Taxonomy. This indicates that, given the cognitive characteristics of gifted students, the act of questioning is regarded not merely as an assessment tool but also as a pedagogical instrument that guides thinking and enriches learning.

Teachers' Views on Challenges in Asking Questions of Gifted Students

When examining the challenges teachers face in the process of asking questions to gifted students, these challenges are seen to fall into two main categories: (i) challenges stemming from students' cognitive and behavioral characteristics, and (ii) challenges stemming from teachers' pedagogical and subject-specific competencies (Table 5).

Challenges Arising from the Cognitive and Behavioral Characteristics of Gifted Students

Research findings indicate that teachers associate certain difficulties in the process of asking gifted students questions with the students' cognitive and behavioral characteristics. In this context, teachers have noted that situations such as students delving into excessive detail when answering questions, struggling to maintain focus, acting hastily, and,

Table 5: Teachers' views on challenges in asking questions of gifted students

Theme	Subtheme (Category)	Codes	f
Difficulties Arising from the Cognitive , and Behavioral Characteristics of Gifted Students	Cognitive and attention processes	Going into too much detail in questions	4
		Difficulty focusing	1
		Hurrying through answers	1
		Inability to understand the questions	1
Challenges Arising from Teachers' Pedagogical and Subject-Specific Competencies	Question-asking skills	Inability to ask questions appropriate to the students' level	11
		Difficulty in asking questions	9
		Difficulty in preparing questions	1
		Coming to class unprepared	1

in some cases, having difficulty understanding the questions complicate the process. In particular, it was noted that students' excessive focus on details causes them to stray from the core purpose of the question and makes it harder to control the Q&A process. Additionally, inattention and a tendency to rush responses were identified as key factors limiting students' ability to focus on questions. One teacher described this situation as follows: "The difficulties in asking questions—meaning sometimes they can't understand what you're trying to ask—that's our challenge; there's a bit of inattention there" (T2)

Similarly, another teacher emphasizes that students' attention processes affect the learning environment: "If we cannot capture their interest in the subject, they tend to get bored quickly. It is hard to keep their attention, and sometimes they disrupt the activity with provocative remarks" (T11)

Challenges Arising from Teachers' Pedagogical and Subject-Specific Competencies

Research findings reveal that the difficulties encountered in the process of asking gifted students are largely related to teachers' pedagogical competencies. Participants indicated that they struggled particularly with creating questions appropriate for the students' level, asking questions effectively, and the question preparation process. In this context, teachers emphasize that producing questions suitable for the cognitive levels of gifted students—questions that require deep thinking and connect different disciplines—is a significant challenge for them. Additionally, some teachers noted that insufficient preparation before class negatively impacted the quality of the questioning process. One teacher described this situation as follows: *"I must admit that I sometimes find this very challenging. Because gifted students can get bored with rote-based or predictable questions. To address this, we need to design questions that encourage deeper thinking and problem-solving, integrate different disciplines, or foster creative solutions" (T6)*

Another teacher, however, expressed that teacher competence directly affects the process as follows: *"A classroom or group atmosphere that is not at the desired level, and the questioner's lack of sufficient mastery of the subject matter, are significant challenges" (T8)*

When the findings presented in Table 5 are considered together, it appears that teachers do not associate the difficulties they encounter in the process of effective questioning for gifted students solely with the students' cognitive characteristics, but also evaluate these challenges within the scope of their own pedagogical competencies and question-design skills. In particular, the difficulties experienced in generating questions appropriate to the student level and that stimulate higher-order thinking indicate that the process of developing questions suitable for the higher cognitive levels of Bloom's Taxonomy requires not only content knowledge from teachers, but also pedagogical content knowledge, differentiated instruction competency, and expertise regarding the characteristics of gifted students. This finding suggests that preparing high-quality questions for gifted students is a complex process dependent not only on theoretical knowledge, but also on practice-based teaching experience and professional competency.

Teachers' Views on the Need for Training to Develop Question-Asking Skills

When examining teachers' views on the need for training to develop their question-asking skills, these views are seen to fall into three main dimensions: (i) the clarity of the training need, (ii) expectations regarding the content and quality of the training, and (iii) alternative views on the training need (Table 6).

Clarity of Educational Needs

Research findings indicate that the vast majority of teachers believe they need additional training to develop their questioning skills for gifted students. Participants stated that systematic and planned training in this area would significantly contribute to teachers' professional development. This indicates that teachers do not consider their current knowledge and skills sufficient and feel the need to improve their ability to ask effective questions for gifted students. One teacher expressed this as follows: *"I think it's necessary. I believe there's a need for training in every term, and I think it's even more important for teachers who teach gifted students" (T3)*

Table 6.: Teachers' views on the need for training to develop questioning skills

Theme	Subtheme (Category)	Codes	f
Clarity of Training Needs	Professional development need	Additional training is needed	17
		Need for pedagogical support for gifted students	
Expectations Regarding the Content and Quality of Education	Structure and delivery of education	Education focused on the student's development	7
		Education from experienced teachers and experts	3
		Ongoing education	3
		Expectations for practice-oriented education	
Alternative Perspectives on Educational Needs and Limited Awareness	A Critical Approach to Education	Preparatory work should be done	1
		I don't know	1

Similarly, another teacher emphasized the necessity of this training as follows: *"It would be highly beneficial for teachers to undergo specific training to develop effective questioning skills in the education of gifted students" (T6)*

Expectations Regarding the Content and Nature of the Training Need

The research findings indicate that teachers not only express a need for training but also develop expectations regarding what form this training should take. Participants stated that training should be appropriate for students' developmental levels, include practical content, and be delivered by experienced professionals. Additionally, teachers emphasized that such training should not be a one-time event but rather a part of a continuous process. This indicates that teachers view professional development as an ongoing process that requires continuous effort. One teacher expressed this view as follows: *"I believe that many teachers (myself included) need to receive training in this area. In this context, I believe every teacher should participate in in-service training and workshops within their subject area to develop their ability to ask questions" (T18)*

Alternative Views on Training Needs and Limited Awareness

Although the vast majority of teachers emphasized the need for training, some participants held different views. A limited number of teachers stated that no additional training was needed to develop questioning skills, arguing that planning before class would be sufficient. One teacher explained this as follows: *"No training is necessary. It is possible to prepare questions that stimulate higher-order thinking skills with a good lesson plan" (T14)*. However, the fact that a small number of participants did not express an opinion indicates that the level of awareness regarding this area is not entirely uniform among teachers.

When the findings in Table 6 are evaluated together, it is evident that the vast majority of teachers feel a professional development need to improve their questioning skills aimed at gifted students. The educational expectations expressed by participants appear to focus not only on learning the theoretical structure of Bloom's Taxonomy, but also on transferring this framework into classroom practice and utilizing it in accordance with the characteristics of gifted students. Furthermore, the demand for practice-based, continuous, and expert-supported training indicates that effective questioning skills are not confined to knowledge acquired in pre-service training, but are regarded as a dynamic area of competence that must be developed throughout one's professional experience. This finding points to the need for systematic and practice-based professional development programs to improve teachers' advanced questioning skills based on Bloom's Taxonomy.

Discussion, Conclusion and Recommendations

In this study, the views of teachers working at BİLSEM regarding the processes of asking questions based on Bloom's Taxonomy for gifted students were examined.

The findings obtained demonstrate that teachers are aware of the importance of Bloom's Taxonomy in supporting the cognitive development of gifted students; however, this awareness is accompanied by various difficulties in forming questions appropriate for higher-order cognitive processes and reflecting these in classroom practices. This indicates that teachers are unable to fully integrate theoretical knowledge with practical experience and reveals that the effective use of Bloom's Taxonomy depends not only on theoretical knowledge, but also on pedagogical competencies geared toward practice.

In this study, the question-asking skills of teachers working at BİLSEM regarding gifted students were examined within the context of Bloom's taxonomy, and the findings were evaluated in light of existing literature. The research results generally reveal that teachers are aware of the importance of Bloom's taxonomy; however, in practice, they face various limitations, particularly in generating questions that target higher-order cognitive processes.

The findings indicate that teachers view Bloom's taxonomy as an important tool in the education of gifted students and believe that the analysis, evaluation, and creation stages, in particular, deepen students' thinking processes. This finding aligns with studies showing that gifted students perform better in creative and inquiry-based, stimulating learning environments (VanTassel-Baska, 2014). Indeed, the literature emphasizes that these students require learning experiences that engage higher-order cognitive skills to unlock their potential (Domu et al., 2023; Soysal, 2025; Uysal, 2025). However, when examining the practical experiences reported by teachers, it becomes evident that while the importance of higher-order thinking is emphasized, lower-level questions dominate classroom practices. This situation aligns with studies in the literature indicating that teachers prioritize the lower levels of Bloom's taxonomy in their question-asking processes (Akdeniz et al., 2025; Filiz, 2009; Yeşil, 2008). Consequently, this finding points to a gap between teacher awareness and practice.

Another significant finding is that teachers reported experiencing various difficulties in the process of creating higher-order questions. These difficulties can be attributed to factors such as time constraints, lack of appropriate materials, and limited experience in writing questions that promote higher order thinking. This aligns with studies indicating that implementing differentiated instruction is a complex and time-consuming process for teachers (Ginja & Chen, 2020; Roberts & Inman, 2023; Rubenstein et al., 2015). In particular, the necessity for teachers to differentiate instruction across content, process, and assessment dimensions in the education of gifted students further complicates this process (Soysal, 2025; Uysal, 2025). Research findings indicate that the development of higher-order questioning skills plays a critical role in the education of gifted students. Indeed, the literature indicates that asking complex questions, encouraging creative responses, and supporting critical thinking contribute to students' deeper and more meaningful learning (Chen et al., 2017; Lo & Feng, 2020; Salmon & Barrera, 2021; Schwartz et al., 2016; VanTassel-Baska, 2014; Wang et al., 2023). In this context, increasing the generation of questions targeting the higher levels of Bloom's taxonomy can be considered a key element in unlocking gifted students' potential.

Another notable finding in the study is that teachers feel a clear need for training to improve their question-asking skills. This indicates that teachers are questioning their current competencies and are open to professional development. Indeed, Akdeniz and others (2025) also emphasize in their work the need to support teachers in differentiated instruction and the creation of questions aligned with Bloom's taxonomy; they specifically note that AI-supported tools can make significant contributions to this process. This finding aligns with studies in the literature that reveal teachers' question-asking skills do not develop spontaneously but rather require systematic and practice-based professional development processes. Indeed, it is noted that teachers need support in generating questions targeting higher-order cognitive processes and effectively using these questions in the classroom (Uysal, 2025). This situation may stem from the practical component not being sufficiently robust in teacher training and in-service education programs. The ability of artificial intelligence systems to generate questions suitable for different cognitive levels holds

the potential to reduce teachers' workload and support the design of differentiated instruction. On the other hand, a study by Akdeniz and others (2025) found that AI-generated questions are comparable to human-generated questions, particularly at lower-level cognitive processes; however, human-generated questions were found to be more in-depth and contextual at higher-level cognitive skills. This situation demonstrates that the creation of higher-order questions is not merely a technical skill but a complex process requiring pedagogical knowledge, subject matter expertise, and contextual awareness. Indeed, it is stated that teachers shape their in-class decisions not only based on knowledge but also according to contextual conditions and pedagogical judgments (Soysal, 2026). Therefore, while AI tools can play a supportive role, they should not be viewed as a solution capable of replacing the teacher. When evaluated from the perspective of educational systems and policies, these findings indicate a need for more structured and practice-based professional development programs aimed at enhancing teachers' higher-order questioning skills. In particular, the provision of AI-supported instructional applications alongside pedagogical guidance can enable teachers to use these tools more effectively and consciously. Furthermore, restructuring assessment and evaluation systems to encourage higher-order cognitive skills could support teachers in incorporating such questions more frequently.

In conclusion, this study revealed that teachers have a high level of awareness of Bloom's taxonomy; however, they require support in practice, particularly regarding the creation of higher-order questions. Considering the cognitive characteristics of gifted students, the systematic use of questions at the analysis, evaluation, and creation levels in their education is important. In this regard, it is recommended to develop practical training programs for teachers, utilize AI-supported tools within a pedagogical framework, and structure assessment processes. Based on the findings of this study, various recommendations can be made for current practice and future research.

From a theoretical perspective, it is recommended that teachers' question-asking skills be examined not only in terms of cognitive levels but also in conjunction with the pedagogical context, teacher beliefs, and classroom interaction processes. In this regard, it is important for future research to examine question-asking skills through multidimensional theoretical frameworks and support these studies with classroom observations.

From a practical perspective, it is recommended that practice-based in-service training programs aimed at developing teachers' competencies in asking questions that target higher-order cognitive skills be expanded. Providing teachers with concrete examples, engaging in reflective practices, and offering hands-on experience through real classroom scenarios in these programs can facilitate teachers' ability to transfer these skills into classroom practice.

From a policy perspective, curricula and assessment systems should be restructured to focus on higher-order thinking skills. Restructuring centralized exam systems to include questions of a higher cognitive level can help transform teachers' classroom practices, thereby contributing to the creation of higher-quality learning environments.

References

1. Akdeniz, H., Clark, T., & Roberts, J. L. (2025). Can AI generate questions aligned with Bloom's Taxonomy? A framework for gifted education to support teachers. *Journal of Advanced Academics 36*(4), 671–694. https://doi.org/10.1177/1932202X251349917
2. Akpınar, B., & Aydın, K. (2010). Change in education and teachers' perceptions of change. *Education and Science, 32*(144), 71–80. https://educationandscience.ted.org.tr/article/view/735
3. Altun, T. and Vural, S. (2012). Evaluation of the views of teachers and administrators of a Science and Art Center (SAC) regarding professional development and school improvement. *Electronic Journal of Social Science, 11*(42), 152–177. https://izlik.org/JA77KR84JW
4. Anasy, Z. (2016). Higher Order Thinking Skills (HOTS) in reading exercises. Tarbiya: Journal of Education in Muslim Society, 3(1), 51–63. http://dx.doi.org/10.15408/tjems.v3i1.3886

5. Anderson, L. W., & Krathwohl, D. R. (2001). *A taxonomy for learning, teaching, and assessing: A revision of Bloom's taxonomy of educational objectives: complete edition*. Addison Wesley. Longman, http://eduq.info/xmlui/handle/11515/18824
6. Ulusoy, K., & Erkuş, B. (2026). Opinions Of Social Studies Teachers On The Value-Behavior Relationship. International Journal of Education Technology and Scientific Researches, 11(33), 140–151. https://doi.org/10.35826/ijetsar.805
7. Barak, M. & Dori, Y. D. (2009). Enhancing higher-order thinking skills among in-service science teachers via embedded assessment. *Journal of Science Teacher Education, 20*(5), 459–474. https://doi.org/10.1007/s10972-009-9141-z
8. Bloom, B. S. (1969). *Taxonomy of educational objectives: A classification of educational objectives: Handbook I, The Cognitive Domain*. McKay.
9. Aybuke Kaval. (2025). Integrating Generative Artificial Intelligence into Higher Education Pedagogy: Opportunities, Challenges, and Future Directions. Fusion EDU: Journal of Education and Learning Sciences, 1(1), 1–10. Retrieved from https://fusionedu.org/home/index.php/JELS/article/view/1
10. Chen, Y.-C., Hand, B., & Norton-Meier, L. (2017). Teachers' questioning roles in elementary science classes: A framework supporting students' cognitive complexity in argumentation. *Research in Science Education, 47*, 373–405. https://doi.org/10.1007/S11165-015-9506-6
11. Chidozie, C. C., Libunao, W. H., Kamen, Y. B., & Saud, M. S. B. (2014). Implementing higher-order thinking skills in the teaching and learning of design and technology education. *TVEIS 2014, 633*.
12. Creswell, J. W. (2015). *A Concise Introduction to Mixed Methods Research*, Sage, New York.
13. Cropley, A. (2022). *Qualitative research methods: A practice-oriented introduction*. Bucharest: Editura Intaglio.
14. Çalışkan, H. (2011). An evaluation of the teacher-made social studies course exam questions. *Education and Science, 36*(160), 120–132.
15. Domu, I., Regar, V. E., Kumesan, S., Mangelep, N. O., & Manurung, O. (2023). Did the teacher ask the right questions? An analysis of teacher asking ability in stimulating students' mathematical literacy. *Journal of Higher Education Theory & Practice*, *23*(5).
16. S. Vasantha, "Explainable Learning Analytics: A Framework for Transparent AI-Driven Decision Making in Higher Education", Insight: Journal of Educational Research and Innovation, vol. 1, no. 1, pp. 1–8, Jun. 2025
17. Freahat, N. M., & Smadi, O. M. (2014). Lower-order and higher-order reading questions in secondary and university-level EFL textbooks in Jordan. *Theory and Practice in Language Studies,* 4(9), 1804–1813. https://doi.org/10.4304/tpls.4.9.1804-1813
18. Ginja, T. G., & Chen, X. (2020). Teacher educators' perspectives and experiences toward differentiated instruction. *International Journal of Instruction*, *13*(4), 781–798. https://doi.org/10.29333/iji.2020.13448a
19. Gottfredson, L. S. (2004). Realities in desegregating gifted education. In D. Boothe & J. C. Stanley (Eds.), *In the eyes of the beholder: Critical issues for diversity in gifted education* (pp. 139–156). Waco, TX: Prufrock Press.
20. Gross, M. U. M. (2002). *Exceptionally gifted children* (2nd ed.). Routledge.
21. Güneş, F. (2012). Improving the thinking skills of students. *Journal of Turkology Research, 32*, 127–146. https://dergipark.org.tr/tr/pub/tubar/issue/16973/177364
22. Igbaria, A. K. (2013). A Content Analysis of the WH-Questions in the EFL Textbook "Horizons." *International Education Studies, 6*(7), 200–224. https://doi.org/10.5539/ies.v6n7p200
23. Khan, W. B. & Inamullah, H. M. (2011). A study of lower-order and higher-order questions at the secondary level. *Asian Social Science, 7*(9), 149–157.
24. Lo, C. O., & Feng, L. C. (2020). Teaching higher-order thinking skills to gifted students: A meta-analysis. *Gifted Education International*, *36*(2), 196–217. https://doi.org/10.1177/0261429420917854.
25. Lubinski, D. (2016). From Terman to today: A century of findings on intellectual precocity. *Review of Educational Research*, *86*(4), 900-944. https://doi.org/10.3102/0034654316675476

26. Campos, J. D. S., & Campos, J. R. (2026). Harnessing Digital Resilience and Sustainable Procurement to Drive Innovation Efficiency: The Mediating Role of Business Continuity in Crisis Contexts. Quality-Access to Success, 27(212), 1
27. Hiçyilmaz Y., & Artan, İbrahim. (2026). Visual Arts Teachers' Perspectives On The Use Of Artificial Intelligence In The Master's Program Process. International Journal of Education Technology and Scientific Researches, 11(33), 130-139. https://doi.org/10.35826/ijetsar.800
28. Tonia Paul. (2025). Cognitive Engagement in Digital Learning Environments: A Learning Sciences Perspective on Student Interaction with Educational Technologies. Fusion EDU: Journal of Education and Learning Sciences, 1(1), 11-20. Retrieved from https://fusionedu.org/home/index.php/JELS/article/view/2
29. Miles, M., & Huberman, A. (1994). *An Expanded Sourcebook on Qualitative Data Analysis*. California: Sage Publications
30. Özden, Y. (2003). *Learning and teaching*: Ankara: PegemA Publishing
31. Passow, A. H. (1982). John Dewey's influence on education around the world. *Teachers College Record*, *83*(3), 401-418. https://doi.org/10.1177/016146818208300304
32. Raqqad, Y. Al, & Ismail, H. H. (2018). Analyzing the reading questions of the AP12 textbook according to Bloom's taxonomy. *International Journal of Education, Psychology and Counseling, 3*(22), 84-94.
33. Ravenna, G. (2008). *Factors influencing gifted students' preferences for models of teaching*. Southern California: University of Southern California.
34. Razmjoo, S. A., & Kazempourfard, E. (2012). On the representation of Bloom's revised taxonomy in Interchange coursebooks. *The Journal of Teaching Language Skills, 4*(1), 171-204. https://doi.org/10.22099/jtls.2012.336
35. Reis, S., & Morales-Taylor, M. (2010). From high potential to gifted performance: Encouraging academically talented urban students. *Gifted Child Today*, *2010*(33), 4. doi:10.1177/107621751003300408
36. Reis, S. M., & Renzulli, J. S. (2010). Is there still a need for gifted education? An examination of current research. *Learning and Individual Differences, 20*(4), 308-317. doi:10.1016/j.lindif.2009.10.012
37. Renzulli, J. S. (2011). What makes giftedness?: Reexamining a definition. *Phi Delta Kappan*, *92*(8), 81-88. https://doi.org/10.1177/003172171109200821
38. Renzulli, J. S., & Reis, S. M. (1985). *The schoolwide enrichment model: A comprehensive plan for educational excellence*. Creative Learning Press.
39. Roberts, J. L., & Inman, T. F. (2023). *Strategies for differentiating instruction: Best practices for the classroom*. Routledge.
40. Rubenstein, L. D., Gilson, C. M., Bruce-Davis, M. N., & Gubbins, E. J. (2015). Teachers' reactions to pre-differentiated and enriched mathematics curricula. *Journal for the Education of the Gifted*, *38*(2), 141-168. https://doi.org/10.1177/0162353215578280
41. Salmon, A. K., & Barrera, M. X. (2021). Intentional questioning to promote thinking and learning. *Thinking Skills and Creativity*, *40*, 100822. https://doi.org/10.1016/j.tsc.2021.100822
42. Santangelo, T., & Tomlinson, C. A. (2012). Teacher educators' perceptions and use of differentiated instruction practices: An exploratory investigation. *Action in Teacher Education*, *34*(4), 309-327. https://doi.org/10.1080/01626620.2012.717032
43. Schwartz, D. L., Tsang, J. M., & Blair, K. P. (2016). *The ABCs of how we learn: 26 Scientifically proven approaches, how they work, and when to use them*. W. W. Norton & Company.
44. Scott, M. T. (2014). Using the Blooms-Banks matrix to develop multicultural differentiated lessons for gifted students. *Gifted Child Today*, *37*(3), 163-168. https://doi.org/10.1177/1076217514532275
45. Soysal, Y. (2025). Enriching Science teachers' instructional noticing in the context of question-asking. *Research in Science & Technological Education*, 1-33. https://doi.org/10.1080/02635143.2025.2519595
46. Soysal, Y. (2026). Understanding compatibilities and inconsistencies between science teachers' professed beliefs and practices about question-asking in science lessons. *Instructional Science*, *54*(1), 15. https://doi.org/10.1007/s11251-025-09770-3

47. Tomlinson, C. A. (2017). *How to Differentiate Instruction in Academically Diverse Classrooms*. ASCD.
48. Ulum, O. G. (2016). A descriptive content analysis of the extent of Bloom's Taxonomy in the reading comprehension questions of the course book Q: Skills for success 4 reading and writing. A descriptive content analysis of the extent of Bloom's Taxonomy in the. *The Qualitative Report, 21*(9), 1674–1683. http://nsuworks.nova.edu/tqr/vol21/iss9/7
49. Utami, F.D., Joko Nurkamto, J., & Marmanto, S. (2019). Higher-order thinking skills on test items designed by English teachers: A content analysis. *International Journal of Educational Research Review, Special Issue,* 756–765.
50. Uysal, P. K. (2025) The Use of Taxonomies in Constructing Text-Based Reading Comprehension Questions: Bloom and Barrett Taxonomies. *e-Kafkas Journal of Educational Research*, *12*(3), 795-816. https://doi.org/10.30900/kafkasegt.1716522
51. Wang, J., Wang, Y., Moore, Y., Sneed, S., Thacker, B., & Hart, S. (2024). Analyzing the patterns of questioning chains and their impact on student learning in science teacher preparation. *International Journal of Science and Mathematics Education*, *22*(4), 809-836. https://doi.org/10.1007/s10763-023-10408-4
52. VanTassel-Baska, J. (2014). Performance-based assessment: The road to authentic learning for the gifted. *Gifted Child Today*, *37*(1), 41-47.
53. Dickson Amexo, "From Chatbots to Co-Teachers: Evaluating the Pedagogical Role of Generative AI in University Classrooms", Insight: Journal of Educational Research and Innovation, vol. 1, no. 1, pp. 9–16, Jun. 2025.
54. Alnsour, S. A., Mohammad, A., & Alnassar, B. (2026). The Impact of Online Consumer Engagement On the Consumer Purchase Intentions: The Mediation Role of E-WOM an Empirical Study in The Jordanian Social Media Environment. Calitatea, 27(212), 16-26
55. Yıldırım, H., & Şimşek, A. (2021). *Qualitative research methods in the social sciences.* Ankara: Seçkin.
56 Zaiturrahmi, Kasi, U., & Zulfikar, T. (2017). Analysis of instructional questions in an English textbook for senior high schools. *English Education Journal, 8*(4), 536–552.