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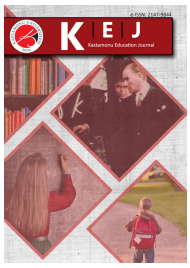

|Araştırma Makalesi / Research Article|

The Characteristics of The Skill Based Questions and Their Reflections on Teachers and Students

Beceri Temelli Soruların; Özellikleri, Öğretmene ve Öğrenciye Yansımaları

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Keywords

1. Central Exams,
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Abstract

This study aims at examining teachers' views on the characteristics of the skill-based questions that have been used in the High School Entrance Exam (LGS) since 2018, the reasons for their changes, and their reflections on teachers and students. Having a qualitative research model, the study employed phenomenological design. The working group consisted of 14 volunteer teachers who worked at secondary school in Kahramanmaraş during the 2019 and 2020 academic year and whose branches were included in High School Entrance exam. The data were obtained through a semi-structured interview form. Content analysis was used during data analysis. The participants stated that skill-based questions are daily life related, challenging and distinctive questions that not only test reading skills but also require high level mental skills. Skill-based questions were identified to contribute to the teachers' professional development, yet they led to some professional difficulties such as lack of resources and materials and unable able to catch up with the curriculum. Besides, skill-based questions were determined to make contribution to the students' problem-solving skills, higher-order thinking skills, interpretation skills and graphic reading skills as well as making knowledge meaningful. However, they also had a negative impact on students with low academic achievement, such as having a sense of failure.

Öz

Bu araştırmanın amacı Liselere Giriş Sınavı'nda (LGS) 2018 yılından itibaren sorulmaya başlanan beceri temelli soruların; özellikleri, değişme sebepleri, öğretmene ve öğrenciye yansımalarının neler olduğunu öğretmen algıları doğrultusunda incelemektir. Araştırma olgu bilim deseninde gerçekleşmiş nitel bir araştırmadır. Araştırmanın çalışma grubunu 2019-2020 öğretim yılında Kahramanmaraş'ta ortaokul kademesinde görev yapan, alanında LGS'de soru çıkan 14 gönüllü öğretmen oluşturmuştur. Araştırmada veriler yarı yapılandırılmış görüşme formuyla elde edilmiştir. Verilerin analizinde içerik analizi kullanılmıştır. Araştırmada beceri temelli soruların; okuma becerisine yönelik, üst düzey zihinsel beceri gerektiren, zorlayıcı, günlük hayatla ilişkili, ayırt edici sorular olduğu sonucuna ulaşılmıştır. Beceri temelli sorular öğretmenlerin mesleki gelişimine katkı sağlamakla birlikte, öğretmenlere programı yetiştirememe gibi bazı mesleki zorluklar getirdiği araştırmada ulaşılan diğer bir sonuçtur. Araştırma sonucuna göre beceri temelli sorular öğrencilerin; problem çözme becerileri ile üst düzey düşünme becerilerini geliştirmeye, bilgiyi anlamlı hale getirmelerine, yorum becerilerini artırmalarına, grafik okumalarına katkı sağlamıştır. Ancak araştırmada beceri temelli soruların akademik anlamda başarısı düşük öğrencilerin başarısızlık duygusuna kapılmalarına neden olmak gibi olumsuz yansımalarının da olduğu bulunmuştur.

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INTRODUCTION

The Ministry of National Education (MoNE) ensures that individuals receive qualified education in accordance with the principle of equality of opportunity in education (National Education Basic Law, 1973) and with the understanding of the social state (TC Constitution, 1982) in Turkey, where compulsory education lasts twelve years. Schools take significant responsibilities for individuals to receive quality education. Even though they make an effort for providing individuals with receiving a qualified education, there may be quality differences among schools due to various reasons such as the administrators and teachers, their physical capacities, workshops, laboratories, equipment, libraries, computers, the number of students in the classrooms (Büyüköztürk, 2016; Gedikoğlu, 2005), parents' socio-economic level and the effect of the physical environment in which the schools are located. Due to all the aforementioned quality differences, some schools may come to the prominence and are more demanded. The low quota of these schools and high demand has resulted in an imbalance of supply and demand, leading to the emergence of the examination as a phenomenon (Baykal, 2014; Büyüköztürk, 2016). Central exams in Turkey (Çepni, Özsevgenç, & Gökdere, 2003) are also named as "high stakes tests" in the relevant literature (Hamilton, Stecher, & Klein, 2002; Jones, Jones and Hargrove, 2003; Kumandaş and Kutlu, 2010).

Central exams that have turned into a struggle for existence both for families and students (Büyüköztürk, 2016; Karadeniz, Er and Tangülü, 2014) are administered by the Ministry of National Education (MoNE) and the Student Selection and Placement Center (ÖSYM) in Turkey. Central exams, which are closely related to a large part of the society (Can, 2017; Çiftçili, 2007), have resulted in a great stress and anxiety tool for students over time (Büyüköztürk, 2016; Dinç, Dere, & Koluman, 2014; Gündoğdu, Kızıltaş, & Çimen, 2010; Kutlu, 2001; Mart, 2014; Şad and Şahiner, 2016; Şahin, Uz Baş, Şahin Fırat, Sucuoğlu, 2012; Taşkın and Aksoy, 2018). Therefore, the students preparing for the exams have difficulties in social, sportive, cultural and physical activities (Bakırcı & Kırıcı, 2008; Kumandaş & Kutlu, 2014; Şahin et al., 2012). Central exams create numerous adverse effects not only for students but also for families as well as teachers (Bakır & Kırıcı, 2008; Buyruk, 2014; Çetin & Ünsal, 2019; Gündoğdu et al., 2010; Kahveci, 2009; Şahin et al., 2012).

The cancellation of High School Entrance Examination (LGS), which is the first step of the central exam, has been a hot topic for years, but merely its name has changed (Güler, Arslan, & Çelik, 2019) and continued its existence under different names such as LGS, OKS, SBS, TEOG (Batur, Ulutaş and Beyret, 2019; Dinç et al., 2014; İncikabı, Pektaş and Süle, 2016). Applied as LGS since the 2017-2018 academic year, this exam consists of two sessions. The first session includes Turkish, Religious Culture and Moral Knowledge, T.C. Revolution History and Kemalism and Foreign Language courses, and the second session encompasses Mathematics and Science courses. Candidates are posed questions related to the verbal area of 50 questions in the first session and the numerical area of 40 questions in the second session (MoNE, 2020).

Since the 2017-2018 academic year, some changes have been made regarding the structure of LGS questions. Therefore, it is likely that the structure of LGS questions is mostly related to reading, understanding, reasoning, associating knowledge with daily life and using higher-level mental skills rather than only measuring knowledge. This new question structure is defined as a skill-based question by the Ministry of National Education. Considering that the questions in PISA are oriented towards realizing what students have learned, solving problems and reasoning, thinking critically and using knowledge (Batur et al., 2019), it may be wise to mention that skill-based questions in LGS exam are similar to those in PISA. In this regard, skill-based questions may also contribute to Turkey's ranking in the international exams.

Although various studies were conducted on LGS at different times (Akay, 2017; Aksoy, 2017; Bakırcı and Kırıcı, 2008; Batur et al., 2019; Büyüköztürk, 2016; Can, 2017; Çolak, 2017; Demirkaya and Karacan, 2016; Dinç et al., 2014; Güler, Arslan and Çelik, 2019; Gündoğdu et al., 2010; İncikabı et al., 2016; Şad and Şahiner, 2016; Şahin et al., 2012; Taşkın & Aksoy, 2018; Yavuz , Odabaş & Özdemir, 2016), there is no such a study specifically published on examining skill-based questions in LGS since 2017-2018 academic year. This was regarded as a shortcoming by the researchers. Besides, the study is expected to reveal the possible positive and negative reflections of skill-based questions on teachers and students, and to help decision makers create a data set within the question styles or the arrangements and changes to be made for LGS.

The results of this study will also contribute to the preparation of the textbooks and the learning objectives in accordance with the skill-based questions. In addition, the study may be a source in revealing the professional difficulties teachers experience about skill-based questions and in determining their professional development needs. Thus, this study aims to identify teachers' perceptions towards the skill-based questions that have been used in LGS since 2018, their characteristics, reasons for change, and their reflections on teachers and students. In service of this aim, answers to the following questions were sought.

1. What are the participants' views on the characteristics of the skill-based questions in LGS?
2. What are the participants' views on the reasons for transition to skill-based questions in LGS?
3. What are the participants' views regarding the reflection of the skill-based questions in LGS on teachers?
4. What are the participants' views regarding the reflection of the skill-based questions in LGS on students?

METHOD

This section presents information regarding the research design, working group, data collection, data analysis, validity and reliability studies.

Research Design

This study employed phenomenological design in accordance with the qualitative research model. The aim of the studies conducted in the phenomenological design is to reveal the meanings people attribute to the phenomenon (Creswell, 2016; Johnson & Christensen, 2012). The phenomenon examined in this study is skill-based questions. In this vein, the present study identified teachers' views regarding the characteristics of the skill-based questions in LGS, the reasons for transition to skill-based questions, their reflection on teachers and students through using the phenomenological design.

Working group

The working group of this study consisted of 14 teachers working in the fields of Mathematics, Turkish, Social Studies, Science, Religious Culture and Moral Knowledge and English in Kahramanmaraş. One of the purposive sampling methods which is widely used in qualitative data collection, criterion sampling method was used for determining the working group (Büyüköztürk, Çakmak, Akgün, Karadeniz, & Demirel, 2018; Yıldırım & Şimşek, 2016). In criterion sampling, criteria that are considered critical for selection are identified (Tavşancıl & Aslan, 2001). The criterion determined in this study was to be a teacher of the courses that have questions in LGS. Besides, great attention was paid to ensure that the teachers had different professional experiences, that there were teachers of all branches with questions in LGS and at least two teachers from the same branch in order to obtain more in-depth and original information from the participants.

Table 1 depicts demographic information regarding the participants.

Table 1. Demographic Information regarding the Participants

		F	Total
Graduation Faculty	Faculty of Education	11	14
	Faculty of Theology	2	
	Faculty of Science and Letters	1	
Gender	Female	9	14
	Male	5	
Seniority	Between 0-5 Years	11	14
	Between 6-10 Years	3	
Age	Between 20-30	12	14
	30 and over	2	
Branch	Mathematics	3	14
	Religious Culture and Moral Knowledge	2	
	Turkish	3	
	Social Sciences	2	
	Science Teaching	2	
	English	2	

Table 1 displays that eleven (78.5%) of the teachers are graduates of education faculty, and three (21.5%) faculty of theology and science and letters. Among the participants, 9 (64.2%) are female and 5 (34.8%) are male teachers. 11 of them have 0-5 years of seniority (78.5%) and 3 have 6-10 years of seniority (21.5%). Twelve (85.7%) of the teachers are between the ages of 20-30, and two (14.2%) over the age of 30. Three (21.4%) of the participants are Mathematics teachers, two (14.2%) Religious Culture and Moral Knowledge, three (21.4%) Turkish, two (14.2%) Social Studies, two (14.2%) Science, two (14.2%) are English teachers.

Data Collection

The data were collected through a semi-structured interview form prepared by the researchers. The form includes nine questions, four of which aim at revealing teachers' views on the characteristics of the skill-based question style, the reasons for transition to skill-based questions, their reflections on teachers and students, while five of them are related to the demographic characteristics.

Data Analysis

Content analysis method was used during data analysis. Analyses were carried out in four stages. The data were coded, the themes were created, the data and codes were organized and the findings were defined and interpreted, respectively (Yıldırım & Şimşek, 2016). The views of two experts were taken during coding process.

Reliability and Validity

Some measures were taken to increase the validity and reliability of the study, and efforts were made to conduct the study in an ethical way (Merriam, 2013). Validity and reliability studies were carried out in terms of the concepts of credibility,

transferability, dependability and confirmability (Yıldırım & Şimşek, 2016). Expert view, researcher collaboration and participant confirmation help to ensure the credibility of the study. An understandable language was used, direct quotations were included, and the findings were visualized for transferability (Çetin & Ünsal, 2020). Data were recorded to ensure confirmability in the study. Besides, the data were coded separately by two different researchers to reach the themes and a common view for dependability.

FINDINGS

This section visually presents findings regarding the research questions.

The first research question is related to the characteristics of skill-based questions. In this regard, Table 2 displays the findings obtained from the interviews.

Table 2. The Characteristics of Skill-Based Questions

Themes	Codes	Participants
The Characteristics of Skill-Based Questions	Developing reading skills	T5, T10, T13
	Selecting students with time management	T4, T5, T6, T13
	Associated with daily life	T3, T11, T13
	Challenging questions	T1, T3
	Measuring high-level skills rather than knowledge	T5, T6, T7, T11, T14
	Being oriented towards interpretation and reading comprehension	T1, T2, T3, T4, T5, T6, T8, T9, T10, T11, T12, T14
	Developing reasoning skills	T3, T4, T6, T9, T11, T13
	Intense content	T1, T4, T6, T8
	Being distinctive	T1, T13

Upon analysing Figure 1, the characteristics of the skill-based questions were identified as developing reading skills (T5,T10,T13), selecting students with time management (T4,T5,S6,T13), associated with daily life (T3,T11,T13), challenging questions (T1,T3), measuring high-level skills rather than knowledge (T5,T6,T7,T11,T14), being oriented towards interpretation and reading comprehension (T1,T2,T3,T4,T5,T6,T8,T9,T10,T11,T12,T14), developing reasoning skills (T3,T4,T6,T9,T11,T13, intense content (T1,T4,T6,T8) and being distinctive (T1,T13).

In terms of developing reading skills, T10 stated that "*Questions about reading comprehension. Even science questions are in a paragraph question style, which means that children are now learning to interpret the paragraph instead of learning knowledge*. T6 shared the view about selecting students with time management as "*students who read, comprehend and apply what they read, and also do good time management…".* In terms of associating with daily life, T11 mentioned that "*since students experience real-life problems during the learning process, they gain skills to solve real-life problems in this process".* T1 emphasized the challenging questions as "*skill-based questions are not really at the secondary school mathematics level, and even sometimes teachers have difficulty"….* Regarding the measurement of high-level skills instead of knowledge, T14 said that *"The previous questions were classical question types that could be solved without the need for high-level mental skills such as understanding, analysis, interpretation, inference, and that a person could memorize knowledge. The current questions measure high-level mental skills, logical reasoning, analysis, interpretation, inference, synthesis, part-whole relationship rather than the knowledge level*…"

As for being oriented towards interpretation and reading comprehension, T12 noted that *"... there are questions about further interpretation and understanding what you read. In addition, there is an increase in graphic interpretation questions."* T4 explained developing reasoning skills as *"skill-based questions, students who read, think, interpret what they read, who make inferences by reasoning, and who produce instant solutions to problems…"*. With regard to the intense content, T4 said, "*The content should be more general and superficial. Some questions are elaborative. We learn them in faculties. It is difficult for children…"*. Regarding its distinctiveness, T13 implied "*to measure students' comprehension, application, analysis, thinking and mental skills along with identifying those who know and who do not...".*

The second research question refers to the reasons for transition to skill-based questions. In this context, Table 3 depicts the findings obtained from the interviews.

Table 3. The Reasons for Transition to Skill-Based Questions

Themes	Category	Codes	Participants
Reasons for transition to skill-based questions	Reasons related to the student	Selecting the successful student	T7
		Getting to know the student	T7
	Preparation for international exams	Preparation for PISA exam	T8, T12, T14
	Using knowledge	Providing permanent learning	T3, T6
		Interpreting knowledge	T1, T2, T6, T10, T12, T14
	Reading skills	Increasing the Significance of Reading	T4, T9, T10
		Reading comprehension	T1, T8, T9, T10, T12, T14
	Thinking skills	Increasing reasoning skills	T6, T8, T14
		Developing higher-order thinking skills	T5, T14, T11, T13
		Multidimensional thinking	T1, T4, T7, T11

Figure 2 presents participants' views on the reasons for transition to skill-based questions; reasons related to students, preparation for international exams, using knowledge, reading skills and thinking skills.

The codes of selecting the successful student (T7) and getting to know the student (T7) emerged under the theme of reasons related to the student. T7 interpreted getting to know the student with such a statement as *"it provides an opportunity for students to explore their different and unknown characteristics"*. The theme of preparation for international exams includes the code of compliance with the PISA exam (T8, T12, T14). In this regard, T12 said *"International exams such as PISA involve questions mostly to understand what you read and to measure interpretation level, and unfortunately, our country's average in these types of exams was quite low. The Ministry of National Education realized this situation and changed their question styles to understanding and interpreting what they read…".*

The codes of providing permanent learning (T3,T6) and interpreting knowledge (T1,T2,T6,T10,T12,T14) were gathered under the theme of using knowledge. With regard to providing permanent learning, T3 noted *"to gain an education system that makes the knowledge more permanent in order to change the education system that cannot be internalized due to memorization, forgotten in a short time, and cannot be associated with daily life..."*. As for the code of interpreting knowledge, T12 said, *"There are more questions about interpretation and reading comprehension compared to the previous questions. There is also an increase in graphic interpretation questions."*

The theme of reading skills was determined to include the codes such as increasing the significance of reading (T4,T9,T10) and reading comprehension (T1,T8,T9,T10,T12,T14). T9 interpreted increasing the significance of reading as *"Students have become more conscious about the significance of reading books"*. As for the code of reading comprehension, T14 stated *"creating a new generation that can understand what they read and that can make solutions".*

The emerging codes such as increasing the reasoning skills (T6,T8,T14), providing high-level thinking skills (T5,T14,T11,T13), multidimensional thinking (T1,T4,T7,T11) were found to be related to the theme of thinking skills. For increasing the reasoning skills, T6 used the phrase *"skill-based questions do not ask us to train robots, but people with reasoning skills".* T1's view on multidimensional thinking was that *"In fact, these types of questions are prepared for multidimensional and interdisciplinary thinking".*

The third research question sought for the reflections of skill-based questions on teachers. Table 4 depicts the findings obtained from the interviews.

Table 4. Reflections of Skill-Based Questions on Teachers

Themes	Category	Codes	Participants
Reflections of skill-based questions on teachers	Contribution to professional development	Using classroom management effectively	T9, T10
		Opportunity to notice the shortcomings	T13
		Teaching in accordance with constructivism	T5, T13
		Using new methods and techniques	T3, T5, T12
	Causing professional difficulties	Solving questions	T1, T2, T4, T8, T14
		Lack of material	T11
		Cathing up with the curriculum	T1
		Question type	T1, T4, T7, T12

As is seen in Figure 3, the participants' views regarding the reflections of skill-based questions on teachers were determined as contribution to professional development and causing professional difficulties. The theme of contribution to professional

development included the emerging codes such as using classroom management effectively (T9,T10), the opportunity to notice the shortcomings (T13), teaching in accordance with constructivism (T5,T13), using new methods and techniques (T3,T5,T12).

In relation to the effective use of classroom management, T9 expressed "*More attention should be paid to classroom management since the student should listen to the lesson more carefully*". T13 used such a statement to explain the opportunity to see the shortcomings as *"The teacher sees his/her own deficiencies and compensates them".* T5's view on teaching in accordance with constructivism was that "*even a teacher who resisted the constructivist system and who did not want to renew himself/herself with skill-based questions had to keep up with the system."* In addition, T5' view on using new methods and techniques was identified as *"the teacher who thinks about how to improve higher mental skills has started to make an effort and to search for a new method".*

The codes such as solving questions (T1,T2,T4,T8,T14), lack of materials (T11), catching up with the curriculum (T1) and question type (T1,T4,T7,T12) emerged under the theme of causing professional difficulties.

T1's view on solving questions was that *"It is challenging for both the teacher and the student. Catching up with the curriculum, dealing with these questions and trying to understand them in the lesson (I can solve a maximum of 3 questions in one lesson in mathematics) are really challenging".* Regarding the lack of material, T11 said, *"The side of skill-based questions that negatively affects me is the lack of resources. All the ministry does about skills-based questions is to publish 6 questions monthly. Neither the curriculum nor the state books support it …".* As for the difficulties experienced in catching up with the curriculum, T11 mentioned that *"Not only is catching up with the curriculum difficult, but it is also challenging for us to deal with these questions and try to understand them in the class".* T7's view on the difficulties related to question type was *"…skill-based questions are usually for high-level students, leading to difficulties in teaching. I assume that simplification of the questions may be more efficient for both the student and the teacher."*

The fourth research question was related to the reflections of the skill-based questions on students. Thus, the findings obtained from the interviews are presented in Table 5.

Table 5. Reflections of Skill-Based Questions on Students

Themes	Category	Codes	Participants
Reflections of skill-based questions on students	In terms of learning skills	Making knowledge meaningful	T1,T9,T11
		Increasing commenting skills	T6,T8,T9,T12,T13
		Reading comprehension	T2,T4,T9,T13
		Graphic interpretation	T5,T12,T13
	Psychologically	Getting bored in class	T10
		The feeling of failure	T1,T2
		Experiencing a sense of achievement	T9
	In terms of mental skills	Developing high-level mental skills	T1,T3,T5,T11
		Developing problem solving skills	T7,T9

As in Figure 4, the participants' views regarding the reflections of the skill-based questions on the students were gathered under the themes of learning skills, psychologically and mental skills. The theme of learning skills holds the codes such as making knowledge meaningful (T1,T9,T11), increasing commenting skills (T6,T8,T9,T12,T13), reading comprehension (T2,T4,T9,T13) and graphic interpretation (T5,T12,T13).

T1' view on making knowledge meaningful was *"skill-based questions are high-level questions to measure knowledge of more than one subject. First comes a story and explanation part, followed by a question. It is unlikely to solve the questions without reading comprehension, interpretation and a good command of subject.*" With regard to increasing commenting skills, T12 implicated that *"Being more open-ended and open to interpretation increases the student's interpretation skills".* Regarding the reading comprehension skill, T13 said *"Contributing to the students' reading and comprehension skills. Even if it is a math question, it improves understanding what you read, finding what is asked and developing cognitive skills".* As to graphic interpretation, T13 used the expression *"supporting with visuals reveals the students' visual learning potential ".*

The theme of psychological aspects involves the codes of getting bored in the lesson (T10), feeling of failure (T1,T2 and experiencing a sense of achievement (T9).

T10' view on getting bored in the lesson was determined as such *"The students want to have break time more than the lesson. They get bored in the lesson as the subjects are intense".* With reference to the feeling of failure, T1 said, *"It causes a feeling of fear, prejudice and failure. It also leads to hopelessness and learned helplessness."* T9's view on experiencing a sense of achievement was that *"skill-based questions help students to feel success by breaking the judgment of "I can't do anything". Thus, the learned helplessness of the students gradually disappears."* When it comes to mental skills, the codes of developing mental skills (T1,T3,T5,T11) and developing problem solving skills (T7,T9) emerged. As regards problem solving skills, T7 noted that *"skill-based questions contribute to students' problem solving skills".*

DISCUSSION, RESULT AND RECOMMENDATIONS

This study attempts to examine teachers' views on the characteristics of the skill-based questions that have been used in LGS since the 2017-2018 academic year, the reasons for transition to skill-based questions, and their reflections on teachers and students.

This study revealed that skill-based questions developed students' reading skills and helped to understand what they read. This result of the study is congruent with that of Batur et al., (2019)'s study, indicating that LGS differs from other exams as it requires speed reading and reading comprehension skills. This study also concluded that the students who used time well and had time management in skill-based questions were successful, while those who couldn't manage time failed in completing the questions within the given time. This result is in conjunction with that of Güler et al. (2019)'s study, referring that the students have time problems as 2018 LGS questions are long and challenging, and thus the duration of the exam is increased. The study conducted by Çakıoğlu (2019) confirmed that students have problems in completing the exam within the given time as mathematical questions require many operations and the number of Turkish texts and paragraph questions are long.

The present study suggested that skill-based questions distinguish students who know and those who do not. On the distinctive characteristics of skill-based questions, Güler et al. (2019) found that skill-based questions in 2018 LGS distinguish successful and unsuccessful students as well as intelligent, fast, practical and analytical thinking students.

The results showed that skill-based questions couldn't be solved by heart, and that these questions measured higher-level thinking skills. This result is in line with that of Biber, Tuna, Uysal, and Kabuklu (2018), demonstrating that LGS questions are more distinctive than TEOG questions, and students can be trained in order not to memorize but to interpret and use knowledge with the renewed exam system. The statement that the questions in the 2018 secondary education transition directive in MoNE will measure high-level skills such as reading comprehension, interpretation, inference, problem solving, analysis, critical thinking, and scientific process skills supports the result of the current study.

A significant characteristic of skill-based questions is that they make the lesson pleasing and entertaining when enriched with materials in the learning process. A similar finding emerged in the study carried out by Akıncı (2019). Accordingly, teachers use various methods such as gamification and drama by making use of visual and auditory materials in order to ensure permanent learning.

Participants implied that the reason for the change in the question type was the preparation for international exams. Indeed, numerous research results outlined that the previous questions in LGS exams were at the level of knowledge and comprehension, and that they were incompatible with international exams such as PISA (Aşıcı, Baysal, & Erkan, 2012: Batur & Alevli, 2014: Batur & Ulutaş, 2013). However, skill-based questions include more high-level thinking skills, they require logic and reasoning, and they are related to daily life, which may be an effort to prepare for international exams.

Teachers also stated that skill-based questions provided an opportunity to notice their deficiencies, and that they needed professional development to overcome these deficiencies. This result of the study is in conjunction with that of Çetin and Ünsal's (2019) study, showing that central exams provide teachers an opportunity to see their shortcomings and to feel the need for constant renewal and self-update. Thus, it is most likely that LGS exam, including skill-based questions, contributes to the teachers' professional development. Cizek (2001) noted that central exams have a positive effect on teachers and endorse their professional development.

The participants certified that they learned and started to apply new methods and techniques appropriate for the constructivist educational approach while they were solving skill-based questions, which supported their professional development and contributed to the increase in the students' achievement. Likewise, Çetin and Ünsal (2019) announced that central exams make teachers seek for new methods and techniques. It may be wise to mention that they perform the education and training activities in order to adapt to the transition to skill-based questions.

The current study found that the resources for skill-based questions were insufficient and the content of the books was incompatible with skill-based questions. Similarly, the results of many studies on the textbooks in Turkey unveiled that the scope and structure of the questions in the central exams do not match the ones in the textbooks, that the textbooks are insufficient to prepare them for the central exams, and that the variety and quality of the questions are inadequate (Arslan and Özpınar, 2009; Gün, 2009; Karakelleoğlu, 2007: Özmantar, Dapgın, Çırak Kurt, İlgün, 2017).

The fact that students are prepared for international exams with skill-based questions, interpret knowledge rather than memorizing, establish an analytical relationship between the subjects, and teachers' professional development efforts is acknowledged as positive aspects, while textbooks' lack of quality to support skill-based questions can be considered as a situation open to criticism. Besides, teachers signified that they could not overcome the problems regarding the lack of resources due to the prohibition of additional resource purchase. Although the Ministry of National Education has banned the purchasing of additional resources in public schools for a number of reasons, there is no restriction in private schools. As indicated by Ünsal and Çetin (2019a), it offers an advantage for students learning at private schools to be more successful in central exams, yet it can turn into a disadvantage for students studying in public schools.

A significant professional challenge that teachers encountered was the inadequacy of lesson time to solve skill-based questions. Likewise, Akıncı (2019) concluded that the teachers could not solve enough questions to reinforce the subjects due to the insufficient duration of the lesson. It seems unlikely that the difficulty related to insufficient course duration can be overcome

by increasing the course hours since extra course hours are considered as a problem in the Turkish education system (Özenç, Özcan, Güçlü, & Güney 2016; Şener, 2018). Another way to overcome this difficulty may be increasing teachers' mastery skills in the teaching process and making pre-lesson preparation more effective.

The study results highlighted that skill-based questions had positive and negative effects on students psychologically. The factor that determines this effect is the students' academic achievement. The questions appeal to academically successful students by affecting them positively. However, students with low academic achievement feel a sense of failure and experience learned helplessness as they fail in solving the questions. Similar results emerged in some studies (Akıncı, 2019 and Çakıoğlu, 2019). Support and training course initiated by the Ministry of National Education may provide an important support for students with low academic achievement. Because, as stated by Ünsal and Korkmaz (2016), support and training courses provide students with question-solving skills. Moreover, students' interest in support and training courses can be increased through different activities (Biber, et al., 2018). In line with the results of the study, skill-based questions may be said to have many positive reflections on both the student, the teacher and the education system, still it negatively affects especially the students with low academic achievement and makes teachers face some professional difficulties. Based on the findings, various recommendations were provided:

Considering that students with low academic achievement are adversely affected by skill-based questions, guidance services may be used more effectively for these students.

The content and activities of MoNE resources may be revised to be compatible with skill-based questions.

Alternative plans may be prepared to address the need for additional resources appropriate to skill-based questions.

In-service training courses may be organized to meet teachers' needs after determining their professional development needs for skill-based questions.

This study employed qualitative research design. Quantitative studies may be conducted with a larger sample group.

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Statements of publication ethics

We hereby declare that the study has not unethical issues and that research and publication ethics have been observed carefully

Researchers' contribution rate

The first author played an active role in writing the conceptual framework and discussion conclusions of the research, and the second author played an active role in the data collection and analysis process.

Ethics Committee Approval Information

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