

## Evaluation of Education Practices for Gifted Students in Turkey according to the Opinions of BİLSEM Teachers\*

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### Abstract

The qualifications that teachers should possess and the challenges they face in the education of gifted students are crucial for enhancing the quality of education. Based on this premise, this study aims to identify what can be done to improve the quality of education for gifted students in Turkey by consulting the views of teachers working in Science and Art Centers (BİLSEM). The phenomenological design, one of the qualitative research methods, was used in this study. The study group consisted of 30 teachers working in Science and Art Centers located in the central districts of Konya during the 2022–2023 academic year. To determine the participants, the typical case sampling method, one of the purposive sampling techniques, was employed. A semi-structured interview form was used as the data collection tool. The collected data were analyzed using content analysis. The results revealed that the main factors negatively affecting the development of gifted students in BİLSEMs include lack of physical resources, teacher incompetencies, insufficient individualized education processes, and inadequate in-service training opportunities. To address these issues, it is necessary to ensure teachers' participation in systematic and practice-oriented professional development programs, adopt student-centered teaching approaches, and improve physical conditions. The findings of this study were found to be largely consistent with the results reported in the literature.

**Keywords:** Educational Practices, Gifted Individuals, Gifted Education, BİLSEM.

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# BİLSEM Öğretmenlerinin Görüşlerine Göre Türkiye'deki Özel Yetenekli Öğrencilere Yönelik Eğitim Uygulamalarının Değerlendirilmesi\*

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## Öz

Üstün yetenekli öğrencilerin eğitiminde öğretmenlerin sahip olması gereken nitelikler ve karşılaştıkları güçlükler eğitimin niteliğinin artırılması açısından önemli bir konudur. Bu noktadan hareketle bu çalışma, Türkiye'de alanda çalışan Bilim ve Sanat Merkezi (BİLSEM) öğretmenlerinin görüşlerine başvurarak ülkemizde üstün yetenekli öğrencilerin eğitim kalitesini artırmak için neler yapılabilir sorusunun cevabını belirlemeyi amaçlamaktadır. Bu çalışmada, nitel araştırma yöntemlerinden fenomenoloji deseni kullanılmıştır. Araştırmanın çalışma grubunu; 2022-2023 eğitim öğretim yılında Konya merkez ilçelerinde bulunan Bilim ve Sanat Merkezlerinde alanda görev yapmakta olan 30 öğretmenler oluşturmaktadır. Araştırmada görüşlerine başvuru alan öğretmenlerin belirlenmesinde amaçlı örnekleme yöntemlerinden biri olan tipik durum örnekleme modeli kullanılmıştır. Veri toplama aracı olarak yarı yapılandırılmış görüşme formu kullanılmıştır. Toplanan veriler içerik analizine uygun olacak şekilde çözümlenmiştir. Yapılan analiz sonucunda, BİLSEM'lerde fiziksel donanım eksiklikleri, öğretmen yeterlilikleri, bireyselleştirilmiş eğitim süreçleri ve hizmet içi eğitimlerin yetersizliği, özel yetenekli öğrencilerin gelişimini olumsuz etkileyen temel faktörler olup, bu sorunların çözülmesi için öğretmenlerin sistematik ve uygulamaya dayalı mesleki gelişim programlarına katılımı, öğrenci merkezli öğretim yaklaşımlarının benimsenmesi ve fiziksel koşulların iyileştirilmesi gerektiği sonuçlarına ulaşılmıştır. Araştırmada elde edilen sonuçlar ile alanyazında var olan sonuçların yüksek oranda örtüştüğü görülmüştür.

**Anahtar Sözcükler:** Eğitim Uygulamaları, Özel Yetenekliler, Özel Yeteneklilerin Eğitimi, BİLSEM.

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## Introduction

Gifted individuals differ from their peers in terms of cognitive abilities, learning pace, and areas of interest, and therefore require specialized educational curricula to develop their potential (Renzulli, 1978; Sternberg, 1985). Traditional education models, which aim to deliver uniform instruction within a fixed time frame, often fail to meet the diverse cognitive and academic needs of gifted students (Çitil, 2018; Gagné, 2004; Tomlinson, 1999). Thus, educational approaches such as differentiated instruction, acceleration, and enrichment are necessary.

Theoretical perspectives on gifted education are shaped by Renzulli's Three-Ring Model, Sternberg's Triarchic Theory of Intelligence, and Gagné's Differentiated Model of Giftedness and Talent. These models conceptualize giftedness as not only high cognitive ability, but also creativity, task commitment, and the influence of environmental factors and educational opportunities. They guide the selection of appropriate educational methods for gifted learners.

In Turkey, as in many democratic countries, the education of gifted individuals is regulated by legal frameworks. However, the inclusion of gifted students within the broader category of individuals with special needs can hinder the fulfillment of their specific educational requirements. In this regard, Science and Art Centers (BİLSEM) stand out as the most prominent institutional structures for gifted education. At the secondary level, students may attend Science High Schools, Social Sciences High Schools, Fine Arts/Music and Performing Arts High Schools, and Sports High Schools, while primary-level students may benefit from support education rooms. Moreover, in 2017–2018, the Research, Development, Education and Application Center (ARGEM) began operating under the Ministry of National Education (MoNE) in Istanbul (Çitil & Sak, 2020).

BİLSEMs are institutions where gifted students receive supplementary education tailored to their needs for several days a week, in addition to their regular schooling (Köksal, 2021). The admission process begins with teacher nominations based on MoNE's observation criteria. Students take a group assessment, followed by an individual evaluation. Those who meet the required standards are accepted into BİLSEM. The educational philosophy of BİLSEM emphasizes not direct instruction but student-led project work under the mentorship of expert teachers (MoNE, 2021). As of 2023, there are 375 BİLSEMs across Turkey, serving 86,436 students (MoNE, 2023). However, despite this quantitative growth, research on gifted students and BİLSEM teachers remains limited.

Prior to the introduction of the presidential system in Turkey, the responsibility for gifted education was shared between the State Planning Organization (DPT) and MoNE. While DPT contributed through broader development plans, MoNE shaped educational policy via National Education Councils (Şahin, 2015). Both institutions initiated efforts such as improving identification procedures, training teachers, establishing financial support systems, and encouraging private sector involvement (DPT, 1996). Parliamentary reports, MoNE's strategic plans, and the Vision 2023 document also played significant roles in policy development (Şahin, 2020).

Teachers play a critical role in meeting the cognitive, emotional, and social needs of gifted students (Dağlıoğlu, 2010). They must be capable of curriculum adaptation, promoting higher-order thinking, and providing appropriate guidance (Cross, 2011; Ehlers & Montgomery, 1999). Teachers lacking training in gifted education may struggle to address these students' needs, but in-service training programs can mitigate this gap (Westberg et al., 1993; Karnes & Whorten, 1996). In Turkey, factors such as at least three years of teaching experience, completion of compulsory service, postgraduate education, project experience, and achievements in the arts or sports are considered in the selection of BİLSEM teachers (General Directorate of Special Education and Guidance Services, 2022).

Based on this background, the present study aims to explore how the quality of gifted education in Türkiye can be improved through the perspectives of teachers working at Science and Art Centers. In line with this aim, the following research questions are addressed:

- How do BİLSEM teachers perceive the educational process in these institutions?
- What challenges do gifted students face in BİLSEMs?
- What competencies should teachers possess to effectively educate gifted students?

## **Method**

### **Research Design**

In this study, the phenomenological design, one of the qualitative research methods, was employed to deeply examine the knowledge and opinions of BİLSEM teachers regarding the education of gifted students. Qualitative research aims to understand and explain social phenomena within their natural context from a holistic perspective (Yıldırım & Şimşek, 2008). This approach allows for theory generation based on participants' experiences. Phenomenology focuses on understanding individuals' perceptions and experiences related to a specific phenomenon (Lester, 1999). According to Creswell (2017), the phenomenological design seeks to explore how participants perceive a certain concept and their related experiences, using data collection tools such as interviews, observations, and document analysis to generate themes. In this study, the phenomenological approach was used to reveal BİLSEM teachers' knowledge and opinions about the education of gifted students through a comprehensive and exploratory perspective.

### **Study Group**

The study group consists of 30 teachers working at Science and Art Centers (BİLSEM) in the central districts of Meram, Karatay, and Selçuklu in Konya during the 2022–2023 academic year. Participants were selected using typical case sampling, one of the purposive sampling methods. This method aims to gain insight into a particular field by examining average or representative cases (Yıldırım & Şimşek, 2008).

Participants reflect the typical profile of BİLSEM teachers in Turkey in terms of age, seniority, academic background, and working conditions. Of the teachers, 14 are male and 16 are female; their ages range from 29 to 53, professional experience ranges from 8 to 25 years, and BİLSEM experience varies between 1 and 17 years. Six participants hold doctoral degrees, 20 have master's degrees, and four have bachelor's degrees. Additionally, 22 teachers have academic publications, and the number of professional development activities they attended in the past year ranges from 1 to 18. The names of the teachers were obtained from the administrative offices of the respective BİLSEM institutions, and semi-structured interviews were conducted with each participant.

### **Research Instruments and Procedures**

The knowledge and opinions of BİLSEM teachers regarding the education of gifted students were examined based on the data collected through semi-structured interviews. Interview is one of the basic data collection tools in qualitative research. In this study, semi-structured interview method, one of the qualitative research methods, was used.

Semi-structured interview is a method in which new questions can be asked and discussed in line with the issues that the researcher has prepared in advance or emerged during the interview process (DiCicco-Bloom & Crabtree, 2006). In this study, the research questions were prepared in line with the relevant literature and the purpose of the study. The opinions of four lecturers working at Necmettin Erbakan University Ahmet Keleşoğlu Faculty of Education were consulted about the prepared questions. Some questions were removed, and some were revised in line with the suggestions of the lecturers.

After organising the semi-structured interview form, the researcher conducted a preliminary study with two teachers working in the field. As a result of the data obtained from the preliminary studies, the final form of the interview form was developed based on the evaluation of the consultant and the researcher. Some sample questions in the interview form are as follows:

- Do you think that the needs of gifted students in BİLSEM are met?
  - What do you think are the most basic learning problems experienced by gifted students in BİLSEM?
  - Which effective ways do you think should be implemented to develop giftedness in BİLSEMs?
- How can we evaluate the effectiveness of the education provided in these institutions?

### **Data Collection Process**

Various measures were taken to ensure that the data collection process was valid and reliable. This process was structured by evaluating internal validity and external validity.

## Internal Validity

The following steps were taken to ensure internal validity:

*Participant volunteerism:* Participation in the interviews was entirely voluntary. Participants were informed that they could withdraw from the study without any justification if they wished.

*Reducing the risk of misleading:* It was explained to the participants that there was no right or wrong answer to the questions, and the leading effects were minimised by reading all questions in the same tone of voice.

*Identity confidentiality:* By stating that the identity information of the participants would be kept confidential, the interviews were conducted in a more comfortable environment.

*Data recording:* Interviews with 16 teachers were audio-recorded, and since 14 teachers did not allow audio recording, detailed notes were taken during the interviews.

*Interview duration:* Interviews continued for three weeks and one-to-one interviews lasting approximately 30 minutes were conducted with each teacher.

## External Validity

To transfer the findings of the study to similar environments, the following methods were applied to ensure external validity:

*Transferability:* To increase the applicability of the results of the study to different contexts, rich description method was used (Cohen et al., 2007; Creswell, 2017). Direct quotations from the interviews and interview notes were presented in detail.

*Sample diversity:* A total of 30 teachers of different branches, ages and genders were interviewed in three different BİLSEMs located in three central districts of Konya province.

*Supervision method:* The data collection process was explained in detail and transparently and cross-checked with different sources to ensure the validity of the methods used (Houser, 2015, as cited in Arastaman et al., 2018).

*Literature support:* The findings were internally consistent and supported by the relevant literature.

## Data Analyses

During the content analysis of the interview transcripts, first pre-coding was performed, followed by focused coding in the second review. Pre-coding is the first basic stage in which qualitative data are divided into separate parts and these parts are closely examined and compared in terms of similarities and differences. Focused coding is the stage that divides the coded data into themes or creates categories according to the similarities of concepts (Saldana, 2022).

## Ethical Procedures

For this study, ethics committee permission was first obtained from Necmettin Erbakan University, and then permission was obtained from Konya Provincial Directorate of National Education through the Institute of Educational Sciences.

Decision number 2022/204

## Results

### 1. Education and Training Process

The statements of the interviewed teachers about the education and training process of gifted students were discussed under three sub-themes: the needs of gifted students, learning problems of gifted students and the effectiveness of the education given to gifted students.

#### Needs of Gifted Students

In the interviews, teachers generally stated that the needs of gifted students are met in BİLSEMs. The teacher statements related to the subject are presented in Table 1.

**Table 1.** Teachers' statements on the needs of gifted students

Explanations	Frequency
Their needs are partially met.	8
Their needs are met.	7
There is a lack of materials.	4
Their needs are not met.	3
There is a lack of buildings.	3
It is difficult to work because of crowded classes.	1
Weekly class hours are insufficient.	1

Teacher statements indicating that the needs of gifted students are met in BİLSEMs are given below.

*"...Yes, because courses are not solely curriculum-based; students receive unlimited support in their areas of strength and have the opportunity to be with peers of similar intellectual levels."* (T29)

In the interviews with teachers, most teachers stated that the needs of gifted students could not be fully met due to lack of materials, inadequate buildings, small number of weekly class hours and crowded classrooms. Teacher statements supporting this view are given below.

*"...There is insufficient physical equipment and materials. The course load is very intense; students go to their own schools as well as BİLSEM and get really tired."* (T9)

### Learning Problems of Gifted Students

As a result of the interviews with teachers, the learning problems experienced by gifted students were categorized under three sub-themes: family-based problems, school-based problems and system-based problems.

#### Family-Based Problems

Some of the interviewed teachers emphasised that the pressure and expectations of families regarding academic achievement create stress and anxiety in gifted students. According to the participants, families' overemphasis on academic achievement causes students to develop a fear of failure and reduces their intrinsic motivation to learn.

**Table 2.** Family-based learning problems of gifted students

Explanations	Frequency
Parents' expectations of academic success cause anxiety in students	2
Parental pressure negatively affects students' motivation to learn	2

The teachers' opinions on the subject are as follows:

*"...The biggest problem is that these students are constantly seen from the perspective of academic achievement. Expectations from teachers, families, and society create great pressure; at the slightest failure, they start to question themselves, even whether they deserve to be loved"* (T12).

*"...Parents' sole focus on exam success stifles students' curiosity and creativity"* (T7).

#### School-Based Problems

Most of the interviewed teachers reported that students come to BİLSEM tired and with low motivation because they attend these classes after normal school hours or on weekends. This fatigue negatively affects their focus and participation in learning activities.

**Table 3.** School-based learning problems of gifted students

Explanations	Frequency
Students are tired when they come to BİLSEM after regular school hours	10
Problems arise because each student has a different learning style, and a separate program cannot be applied to all of them.	4
Students cannot be productive at BİLSEM due to LGS (High School Entrance Exam), YKS (Higher Education Entrance Exam) and other exams at school.	3
Students get bored when courses are repeated.	3
They have trouble focusing.	3
Failure anxiety affects their learning.	2
Since they like individual work more, they cannot be effective in group work.	2

The teacher statements on the subject:

*"...Coming to BİLSEM after school, being here instead of resting on weekends, coming tired and hungry are barriers to learning."* (T27).

*"...Each student has a different learning style, but individualized education is impossible due to group size. We need stronger and better-structured BİLSEMs."* (T10).

*"...They have high curiosity, perception, and problem-solving skills but feel pressure when judged by exam grades, believing they must be flawless."* (T12).

### **System-Based Problems**

Some of the learners mentioned structural and institutional problems that prevent gifted students from fully benefiting from BİLSEM education. These problems include inadequate physical infrastructure, insufficient class hours and the lack of a systematic evaluation mechanism.

**Table 4.** *System-based learning problems of gifted students*

<b>Explanations</b>	<b>Frequency</b>
Physical environments in BİLSEMs are not suitable for the needs of students	1
Due to the insufficiency of the course hours, the learning activities desired by the students cannot be realised.	1
Lack of evaluation system in BİLSEM decreases the motivation of students	1

The statements of the teachers about the system-based learning problems of gifted students are as follows:

*"...Our buildings are not designed according to the needs of students. We need appropriate environments to support their potential"* (T10).

*"...There are not enough hours to offer what students really want in terms of learning activities"* (T25).

*"...There is no assessment system here, which makes it difficult to maintain students' motivation"* (T22).

### **Effectiveness of the Education Provided to Gifted Students**

In interviews with teachers, it was stated that to develop the talents of gifted students and increase the effectiveness of their education, BİLSEMs should be institutionalized, differentiated instruction should be implemented, and problem-solving skills should be developed. Teacher statements supporting this idea are provided in Table 5.

**Table 5.** *Teacher statements regarding the effectiveness of the education provided to gifted students*

<b>Statements</b>	<b>Frequency</b>
BİLSEMs should be schooled, and the focus should be on developing talents in these institutions.	6
Instead of group teaching, individual and more personalized education planning can be considered.	3
Group work needs to be developed.	3
Problem-solving skills need to be developed.	2
There should be no lack of materials and supplies.	2
A process-based evaluation should be available.	2
Parents should be informed about the work and functioning of BİLSEM.	2
Courses should focus on practical application	2
Differentiated education programs should be implemented both in schools and in BİLSEMs.	1
Learning environments should be reorganized by improving physical conditions.	1
Learning methods, higher order thinking skills and scientific research skills need to be more systematized.	1

The statements of the teachers who emphasized that BİLSEMs should be institutionalized and that this would prevent students from being split between their regular schools and BİLSEM, thus increasing the effectiveness of education, are presented below.

*“...The main issue is extra course load. Integration may prevent student fatigue and reduce extra homework. Schools are exam-focused, so education is ineffective.” (T13)*

In interviews, some teachers stated that in order to increase the effectiveness of education for gifted students, teachers should be trained so that they are more equipped in the field.

*“...BİLSEM teachers should receive orientation and ongoing training. Experienced and new teachers should collaborate. Regular school teachers should also be informed about differentiated education for gifted students.” (T10)*

## Teacher Selection and Placement

### Teacher Qualifications and Selection Process

Most of the teachers interviewed stated that teachers assigned to work with gifted students should have received training in this field, be proficient in their area, have completed graduate education, and possess an innovative perspective. Teacher statements on this topic are provided in Table 6.

**Table 6.** Teachers' statements on teacher qualifications and selection processes

Statements	Frequency
Teachers should have received education in the field of education of gifted students.	15
Teachers should be knowledgeable in their fields.	8
Teachers should be selected from among those with postgraduate education.	7
Teachers should be innovative.	7
Teachers should have effective communication skills.	5
Criteria for selecting teachers should be oriented towards practice or project development.	3
Teachers should be cooperative.	3
I don't think there is a problem in the teacher selection process.	3
Interviews in the process of selecting teachers should not be regionalized.	2
Teacher should have self-efficacy and self-regulation skills.	2
The process of selecting teachers for BİLSEMs should be spread out over time.	1

The vast majority of the teachers interviewed stated that educators who will play a role in the education of gifted students should have received training in this field, and the teacher views on this topic are provided below.

*“...Teachers should have the competence to guide students rather than provide traditional instruction. Teachers who are not experts in their fields are insufficient for students and may cause them to lose focus on their areas of interest... They should also have the ability to conduct academic work. The selection process involves interviews by experts in the field; however, popular teachers tend to be preferred over village teachers, which should be regulated, and village teachers should be encouraged.” (T13)*

Some of the teachers interviewed mentioned that graduate education is an important criterion in the selection of teachers who will work with gifted students. The relevant teacher statements are provided below.

*“... Teachers should have postgraduate education and research-writing skills. Interview questions should be more field-specific to BİLSEM; generic questions about the institution's operation are insufficient.” (T10)*

Some teachers participating in the study stated that teachers working with gifted students should be innovative, collaborative, possess effective communication skills, and be competent in application and project development. Teacher statements supporting this view are provided below:

*“BİLSEM teachers need to constantly develop themselves and keep up with innovations in their field. For example, digital arts and animation are important innovations in visual arts. Teachers should not lose enthusiasm for the activities or learning, and their career history should reflect this commitment.” (T19)*

Some of the interviewed teachers stated that the teacher selection process for BİLSEM should be centralized, not regional, and the process should be expanded. Teacher views on this topic are provided below:

“...In previous years, teachers were required to conduct training and prepare projects during a camp period, and decisions were made based on their performance. I believe this method is more effective than interviews.” (T8)

### **Training of Teachers**

Most of the teachers who participated in the study stated that teachers should do internship with experienced teachers before starting to work in BİLSEM and that BİLSEM staff should be given frequent in-service training. Teacher opinions on this issue are given in Table 7.

**Table 7.** Teachers' statements on the training of teachers

<b>Statements</b>	<b>Frequency</b>
In-service trainings should be conducted frequently.	6
Teachers should do an internship with experienced teachers before starting to work at BİLSEM.	5
Trainings on scientific research methods, application and project development should be provided.	5
Trainings involving university-BİLSEM cooperation should be provided.	3
Trainings should be provided on the characteristics and learning methods of gifted students.	2
In-service trainings should take place outside school hours.	2
In-service trainings should be organized where all BİLSEM teachers are together.	2
I think that in-service trainings should be given face-to-face.	2
Trainings for teachers are adequate.	2
Teachers should be encouraged to pursue postgraduate education.	1

Most of the teachers interviewed in the study stated that teachers should receive in-service training to acquire knowledge in the field of education for gifted students.

“...Teachers who are recognized as experts and have developed themselves within BİLSEM should be involved in practices. Internships at BİLSEM could also be implemented.” (T2)

“...Technology is advancing rapidly; therefore, workshops should be organized every six months to support professional development.” (T8)

While some of the interviewed teachers stated that teachers should be provided with trainings on scientific research methods and project completion, some of them also stated that trainings involving university-BİLSEM cooperation should be provided. Teacher opinions supporting this view are given below.

“...In-service training should be provided periodically to BİLSEM teachers. Collaboration with universities should be increased, and trainings should focus on practical applications.” (T21)

“...With academic support, for example, an electronics engineer should teach a physics teacher. Practical trainings would be more beneficial.” (T19)

Some of the teachers who participated in the study think that it would be more beneficial to provide in-service trainings to teachers outside of school hours, that is, in an environment where all BİLSEM teachers come together, and face-to-face trainings are given. Teacher opinions on this issue are given below.

“...Professional trainings should be planned so as not to disrupt school courses. Missing a week of classes causes significant disruptions” (T17)

“...In-service trainings gathering science teachers should be organized, and how to integrate higher-order thinking skills into activities should be taught.” (T27)

Some of the teachers who participated in the interview stated that the trainings provided were sufficient. Teachers' opinions on this subject are given below.

“...The Directorate General has conducted extensive work on programs like Photoshop and animation in visual arts, which received very positive feedback.” (T19)

### **Discussion, Conclusion and Recommendations**

In this section, conclusions, discussions and recommendations are given in line with the findings obtained from the interviews with teachers working at Konya Meram Science and Art Centre, Karatay Science and Art Centre and Yüksel Bahadır Alaylı Science and Art Centre.

The findings of the study show that the physical equipment of BİLSEMs is inadequate and the lack of materials may negatively affect the development of students. The findings obtained in the study regarding physical equipment support the results of the research conducted in the literature (Atlı & Balay, 2016; Karakuş, 2010; Koç, 2016; Sarı & Öğülmüş, 2014). The inadequate physical equipment and facilities of these buildings established for the education of gifted students do not allow these institutions to fully fulfil their functions. The physical equipment of BİLSEMs can affect the product development skills of gifted students. It is of great importance to solve these problems in BİLSEMs and create environments where students can realise their ideas, have sufficient technological infrastructure, do not experience material shortages, study comfortably, and meet their basic needs such as nutrition and rest.

The question posed to the teachers in the study is aimed at determining what the learning problems of gifted students are and why they arise. Summak and Çelik Şahin (2014) concluded in their study that students had time problems while attending formal education institutions and BİLSEM. This result is similar to the result of the current study. Keskin et al. (2013) also encountered similar results in their study. The crowded classrooms or workshops make it difficult for the teacher to plan education according to the interests and wishes of each student. While this situation hinders meeting the individual learning needs of gifted students, it may also prevent them from fully revealing their potential.

Regarding the training of teachers before they start working with gifted students, Işık and Güneş (2017) stated that the teacher selection process should be the result of at least a one-month in-service course. Regarding individual education for gifted students, Tomlinson and Strickland (2005) and Tomlinson and Eidson (2003) stated that if students have different readiness levels in the differentiation process, materials and study groups at various levels can be created; stepped teaching, learning centers, mini workshops, individual or group instruction according to their levels can be implemented, and homogeneous or heterogeneous groupings based on their levels can be organized... If students have different learning styles, they can be encouraged to work individually or in groups, alternatives can be created for their learning, collective and individual studies can be used to diversify activities. According to Gardner's theory, it is seen that gifted students have better problem solving skills in the subjects they are superior in (Kuo et al., 2010). However, this does not take into account students' high-level learning skills (Calero et al., 2011). These findings reveal the necessity of increasing teacher competences in the education of gifted students. In order to provide a qualified education process, it is important to equip teachers not only with theoretical knowledge but also with practical skills.

The question posed to the teachers in the study is aimed at determining the qualifications that teachers working in BİLSEMs should have and how the selection process of these teachers should be. Bilgiç (2017) stated that it is important to improve the qualifications of teachers of gifted students through in-service courses, certificate programmes and postgraduate education. In Israel, teachers who want to work with gifted students can provide education in this field only after receiving a certificate (Nevo & Rachmel, 2009). In South Korea, teachers who want to work with gifted students are required to have a secondary education certificate, graduate education or five years of teaching experience (Choe, 2016; Öznacar, 2011). Teachers working in BİLSEMs should have sufficient education and experience in their fields in order to meet the needs of gifted students. In countries such as Israel and South Korea, certification or postgraduate education is required for teachers to work with gifted students. It is thought that the implementation of a similar system in Turkey can increase teacher competencies. However, in order to implement such a system, it is of great importance to support the professional development processes of existing teachers and to create accessible training programmes. Moreover, not only academic achievement and experience but also teachers' ability to adopt student-centred teaching approaches should be evaluated. In this context, the teacher selection process needs to be developed into a comprehensive structure that measures pedagogical competencies and individualised teaching skills.

Demirel (1999) stated the personal and professional qualities that teachers should possess as motivation, focusing on success, professionalism, planning teaching activities, utilising teaching methods and techniques, having effective communication skills, time management, evaluating the learning process and guidance. A teacher with these qualities will prepare the learning environments of both students with normal development and gifted students in the most appropriate way. Considering the importance of these qualities for the education of gifted students, teachers should be equipped not only with academic knowledge but also with the ability to apply differentiated instructional strategies. In particular, teachers who can create flexible and creative learning environments for the individual needs of gifted students play a critical role in maximising the potential of these students.

The question posed to the teachers in the study is aimed at determining how the training processes of teachers working with gifted students should be. According to Altun and Vural (2012), Konaş and Yağcı (2016), the education and competence levels of teachers working in BİLSEMs and the insufficiency of in-service trainings are important issues that need to be addressed. Akın (2019) stated in his study that administrators and teachers working in BİLSEMs should receive systematic in-service training and seminars and be regularly supervised in order to maintain their current standards and improve themselves. While some teachers attend only one in-service training during the year, there are some who attend 18 in-service trainings. A systematic organisation can be made in this regard. Şahin (2005) stated that teachers should benefit from their own internal resources as well as their knowledge and skills, get help from their emotions, perceptions, experiences, life philosophies, obtain information from children's families and share all these with their colleagues at school. In order for teachers to work effectively with gifted students, it is not enough for them to participate in in-service trainings; the content of these trainings should be focused on in-depth knowledge and practice. In addition, increasing professional co-operation among teachers and regular communication with families will provide a better response to the individual needs of students. In this context, establishing a systematic and continuous professional development programme will contribute to the sustainable development of teachers' professional competencies.

Suggestions according to the research results;

1) In order for BİLSEMs to serve their purposes better, their physical equipment should be improved and buildings specific to BİLSEMs should be designed. Workshops should be fully equipped, laboratories should be developed, and working environments should be created in artistic fields such as exhibitions, painting, and theatre.

2) A holistic approach can be taken in the selection of teachers to work in BİLSEMs and decisions can be made by looking at teachers' communication skills, creativity, experience, education, scientific research skills and project execution skills.

3) In undergraduate programs of universities, courses on the education of gifted students can be given so that prospective teachers can get to know this field.

4) In order for teachers working in BİLSEMs to improve themselves, seminars and in-service trainings can be planned periodically according to the needs analysis. Some of these trainings can be given by academicians.

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