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Bilim ve Sanat Merkezi Öğretmenlerinin Üstün ve Özel Yetenekli Öğrenciler için Tasarlanan Doğa ve Bilim Kampı Hakkında Görüşleri

Perceptions of Science and Art Centers' Teachers about a Nature and Science Camp Designed for Gifted and Talented Students

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Öz

Ülkemizde üstün ve özel yeteneklilerin (ÜÖY) eğitimi konusunda oldukça geç kalınmıştır. Bu çalışmanın amacı bilimin doğası etkinliklerini içeren bir doğa ve bilim kampının ÜÖY öğrenciler üzerine etkilerini, Bilim ve Sanat Merkezlerinde (BSM) çalışan öğretmenlerin görüşlerine göre incelemektir. Çalışmada eylem araştırması kullanılmıştır. Doğa ve bilim kampında gözlemci olarak bulunan 10 gönüllü BSM öğretmeni çalışma grubunu oluşturmaktadır. Veriler öğretmenlerden odak grup görüşmesi ve yarı yapılandırılmış form yoluyla elde edilmiştir. Öğretmenler kampın öğrencilerin sosyal yeteneklerine ve bilimin doğasına yönelik bakışlarına olumlu etkilere neden olduğunu belirtmişlerdir. Ayrıca, katılımcıların BSM'de çalışmalarına rağmen çoğunun ÜÖY öğrencilerin özel eğitimleri hakkında yeterli donanıma sahip olmadıkları anlaşılmıştır. Bu nedenle öğretmenler, ÜÖY öğrencilerin yeteneklerini geliştirecek bu tür programlara ve çeşitli bilimsel etkinliklere ihtiyaç duyduklarını belirtmişlerdir.

Anahtar Kelimeler: bilim ve sanat merkezi, yaz bilim kampı, üstün ve özel yetenekli

Abstract

Education and training for gifted and talented (GT) students have had slow growth rate in Turkey. The aim of this study was to investigate teachers' perceptions about the effectiveness of a nature science camp including the nature of science activities on GT education. Action research was used to carry out the study. The sample of the study included 10 voluntary teachers working in Science and Arts Centers (SAC). As the participants, they were observers in the nature and science camp. Focus group and semi-structured interviews were used for data collection. The results showed that teachers indicated that the nature and science camp had positive effects on students' skills and their perspectives of the nature of science. Further, it was found that most participants were not sufficiently trained in gifted education, although all of them worked in the SACs. Therefore, they stated that they needed this kind of programs and various science activities to improve GT students' skills.

Key Words: science and art centers, nature science camp, gifted and talented students

Summary

Purpose and significance: According to Kirk and Gallagher (1989) "gifted and talented" means children who have high performance capability in one or more areas such as leadership ability, creative, artistic, or intellectual or in specific academic fields, and who require service or activities not ordinarily provided by the school in order to fully develop such capabilities (cited in Yılmaz and Çaylak, 2009).

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Considering the positive outcomes of gifted education programs and based on educational conditions in Turkey, SAC programs were designed for the gifted in Turkey. The first SAC was established in 1992 (Dönmez, 2004). Since then, 59 SACs have been established, and as of 2010, these programs serve 6,942 gifted children (BSMİDR, 2010). These programs have significant effects on gifted students' science achievement (Yılmaz and Çaylak, 2009), but also have many problems, such as those related to corporate governance problems, inadequate physical infrastructures, and teacher training for special education (Gökdere and Çepni, 2003).

The aim of this study was to investigate teachers' perceptions about the effectiveness of a nature science camp, including the nature of science activities on GT's education.

Method: The sample of the study included 10 voluntary teachers working in three SACs. As the participants, they were observers in the nature and science camp. Action research was used to carry out the study. Action research is characterized by spiraling cycles of problem identification, systematic data collection, reflection, analysis, data-driven action taken, and, finally, problem redefinition (Johnson, 1993, p.1).

The researcher designed a nature and science camp project aiming at teaching the nature of science while developing gifted students' social skills through several engaging activities. The designed project included nature of science activities, science experiments, observing the nature, sky, cave, and coal mine. Six instructors from three universities and two teachers from one SAC trained 30 gifted primary students from three cities in a one-week science camp. The teachers who were the participants of the study were observers in the nature and science camp. Qualitative methods were used to collect data. Two methods of data collection were carried out: a semi-structured interview which included six open-ended questions and a focus group interview with two teachers. Data were analyzed using qualitative content analysis method by coding and creating categories and themes.

Results: The findings about teachers' perceptions of the nature and science camp were grouped in two major themes: camp program content and science activities content.

Teachers' perception about the program: The frequency analysis showed that the program provided students with opportunities to think about science (N=8), developed students' skills (N=8) and allowed to students' understanding of nature of science (N=7). Teachers believe that content should be designed with a consideration of the camp area (N=6), activities should be renewed (N=3), content should be reduced (N=2) and content should be changed (N=1).

Teachers' perception about the activities: According to teachers perceptions, program activities influenced students' cognitive skills (N=9), social skills (N=7), developed students' psychomotor skills (N=6), had enough equipment (N=5), provided enjoyable learning experiences (N=5), were interesting (N=4), were either short or long (N=3), had insufficient applica-

tions (N=3), were insufficient (N=6), were not for different age groups (N=8) and were not for different mental abilities (N=1).

Discussion and Conclusions: The results showed that teachers indicated that the science camp including the nature of science activities had positive effects on gifted students' skills and their perspectives of the nature of science. Further, it was found that most participants were not sufficiently trained in gifted education, although all of them worked in the SACs. As they were aware of the situation, they stated that they needed this kind of programs and various science activities from other education faculties to improve their skills in order to teach gifted students in science.

Identification, training and employment of gifted individuals significantly contribute to the development of society. Training of these individuals in every academic level will provide value-added benefits to the future of our country (BSMİDR, 2010). The lack of these conditions will impede or delay their self-esteem, self-perception, discipline and achievement (Sak, 2011).