

## Preservice Special Education Teachers Perceptions of Giftedness

### Özel Eğitim Öğretmeni Adaylarının Üstün Zekâ Algıları

Omer Erdimez

Adiyaman University, Department of Special Education, oerdimez@adiyaman.edu.tr, Adiyaman, Türkiye.

ORCID: 0000-0002-5223-7953

#### ABSTRACT

The purpose of this study was to detect pre-service special education teachers' perceptions of giftedness by asking them to report characteristics of these students. Eight pre-service special education teachers who were attending one of the biggest universities in the Southeast of the United States voluntarily participated in this study. An open-ended questionnaire delivered to eight pre-service teachers and a follow up interview were made with two of the participants. Pre-service teachers' responses to open-ended questionnaire and interview questions were analyzed by using Grounded Theory. By using inductive method, four themes were created about characteristics of gifted students: academic, cognitive, social/interpersonal, and barriers for gifted identification. Findings of this study indicated that pre-service teachers who were identified as gifted during their school life and pre-service teachers who had credentials in education of gifted students reported similar characteristics for gifted students. Based on the findings of this study, it is suggested to increase the number of courses about gifted education and scholarships for gifted students in teaching programs to better identify potential gifted students.

**Keywords:** Special Education, Pre-Service Teachers, Gifted, Perception.

#### ÖZET

Bu çalışmanın amacı özel eğitim öğretmeni adaylarının üstün zekâ algılarını tespit etmektir. Bu amaçla, öğretmen adaylarından üstün zekâli çocukların özelliklerinin neler olduğunu rapor etmeleri istenmiştir. Amerika Birleşik Devletlerinin güney-batısındaki en büyük üniversitelerden birinin özel eğitim öğretmenliği programına devam eden sekiz öğretmen adayı gönüllü olarak bu çalışmaya katılmışlardır. Sekiz öğretmen adayına açık uçlu bir anket verilmiş ve ardından iki öğretmen adayı ile derinlemesine birer görüşme gerçekleştirilmiştir. Öğrencilerin anket ve görüşmelerde verdikleri cevaplar tümevarımsal metod kullanılarak analiz edilmiş ve 4 tane tema oluşturulmuştur: akademik özellikler, bilişsel özellikler, sosyal/kişilerarası özellikler ve üstün zekâlıları tanılamada engeller. Çalışmamızın bulguları daha önce üstün zekâli olarak tanımlanan veya üstün zekâ ile ilgili dersler alan özel eğitim öğretmeni adaylarının üstün zekâli çocukların özelliklerinden bahsederken aynı özelliklere vurgu yaptıklarını ortaya çıkarmıştır. Çalışmamızın bulgularından hareketle üstün zekâ tanımlanmış kişilerin öğretmenlik mesleğine yönlendirilmesi amacıyla bu kişilere daha fazla burs imkânlarının oluşturulması ve ayrıca öğretmenlik programlarındaki üstün zekâlılar ile ilgili derslerin sayılarının artırılması tavsiye edilmektedir.

**Anahtar Kelimeler:** Özel Eğitim, Öğretmen Adayları, Üstün Zekâ, Algı.

## 1. INTRODUCTION

To be identified as gifted, first, a student must be referred (nominated) for identification process. This step is the first step of identification process. Although initiators (sources) of the referral process may vary in different states and countries, in most cases, teachers are the initiators of the identification process (Davis & Rimm, 2004; Hallahan, Kaufmann, & Pullen, 2009). Because of teachers' important role in identification process of gifted kids, teachers' perceptions, knowledge, beliefs, and any factors that affect teachers' referral decision become very crucial.

In spite of teachers' crucial role in identification process, previous research has shown that teachers have shortcomings to make sound and accurate referrals. Previous research has shown that certain student and teacher level factors affected teachers' referral decisions. Student's cultural background and ethnicity (Elhoweris, Mutua, Alsheikh, & Holoway, 2005; Grantham, 2002), personality traits of the student (Alvidrez & Weinstein, 1999; Endepohls-Ulpe & Ruf, 2005; Hunsaker, 1994; Persson, 1998; Siegle et al., 2010), student's socio-economic status (Van Tassel-

Baska, Patton, & Prillaman, 1991), student's age (Siegle et al., 2010), twice-exceptionality of a student (Bianco & Leech, 2010), and words describing the student (Siegle et al., 2010) were some of the student level factors affected teachers' referral decisions. On the other hand, teacher's gender bias (Bianco, Harris, Garrison-Wade, & Leech, 2011; Siegle & Reis, 1998), teacher's knowledge level of giftedness (Bianco & Leech, 2010; Morris, 1987), teacher's stereotypical views of giftedness (Grantham, 2002; Miller, 2009; Peterson & Margolin, 1997; Powell & Siegle, 2001), and teacher's giftedness status (Bégin & Gagné, 1994; Michener, 1980) were teacher level factors that affected referral decisions.

In spite of many subjective factors adversely affecting teachers' perception of giftedness and their decision to refer a student for gifted screening, the previous research has showed that there were couple other factors that positively affected teachers' referral decisions. Previous research has shown that there was a positive relationship between teachers' knowledge level of giftedness and their attitudes toward gifted students (Morris, 1987). Moreover, teachers' decision for referral process mostly affected by their credentials in education of gifted students (Bianco & Leech, 2010). Also, teachers' status of being gifted or having family members and/or friends who are gifted might affect their perceptions and attitudes toward gifted students (Michener, 1980).

When considering student and teacher level subjective factors that affect the referral process and teachers' crucial role in identification process, teachers' perceptions of giftedness becomes very important. The purpose of this study is to detect pre-service special education teachers' perceptions of giftedness. Because special education teachers have the highest possibility to attend some classes about gifted students and their characteristics; I chose to include those pre-service teachers in this study.

The following questions guided the study:

1. What are the general perceptions of pre-service special education teachers about giftedness?
2. To what extend pre-service special education teachers' perception of giftedness affected by their gender?
3. To what extend pre-service special education teachers' perception of giftedness is affected by their credentials in education of the gifted?
4. To what extend pre-service special education teachers' perception of giftedness is affected by their giftedness statues?

## **2. METHOD**

### **2.1. Research Design**

This study was an exploratory qualitative study (Creswell, 2014) aimed to investigate pre-service special education teachers' perceptions of giftedness. To investigate pre-service special education teachers' perceptions of giftedness, an open-ended questionnaire, which includes independent variables such as ethnicity, gender, credential information, and giftedness statues of pre-service teachers, was delivered to those teachers. To be able to triangulate the data, a follow up interview was conducted with some of the pre-service teachers. By using an open-ended questionnaire and a follow up in-depth interview (Appendix A & B) pre-service special education teachers' perceptions of giftedness were investigated.

### **2.2. Participants**

Eight pre-service special education teachers who were attending a special education program at one of the biggest universities in the Southeast of the United States voluntarily participated in this study. All of the eight pre-service special education teachers filled out the open-ended

questionnaire. Only two of the pre-service teachers accepted to be interviewed with after filling out the questionnaires. Information regarding students' ethnicities, gender, giftedness status, and their credentials in education of gifted students was provided in Table 1.

**Table 1.** Demographics and Information about Participants

Participants	Gender		Ethnicity		Giftedness		Credentials
	Male	Female	White	Mix	Gifted	Non-Gifted	
Participant 1		√	√		√		8
Participant 2		√	√			√	0
Participant 3		√	√		√		0
Participant 4	√		√			√	0
Participant 6		√	√		√		3
Participant 8		√		√	√		0
Participant 9		√	√			√	24+
Participant 12	√		√		√		0

### 2.3. Data Collection and Analysis

At the end of a weekly meeting for an undergraduate course in special education department of the aforementioned university, the announcement of the study was made. After announcement, the lay summary of the study was delivered to the students. Students who accepted to be a part of study also received consent form and the open-ended questionnaire. Students were asked to fill out and bring back the questionnaire to the class the following week. Also, students were asked if they would like to be interviewed with about their responses to the open-ended questionnaire. After making announcements in three different classes, I was able to deliver 12 questionnaires to pre-service teacher. In the next three weeks, I visited three classes every week to gather the questionnaires. Only 8 pre-service teachers returned the questionnaire and only two of the pre-service teachers accepted to be interviewed with about their responses to the questionnaire. The researcher also received contact information of pre-service teachers who wanted to be interviewed with during these visits. After collecting eight complete questionnaires, the researcher set up two

meetings for interviews. The first interview ended in 30 minutes and the second interview ended in 45 minutes. All the responses of pre-service teachers were audio-recorded.

Participants' responses to open-ended questionnaires and interview questions were analyzed by using Grounded Theory (Glaser & Strauss, 1967). By using this method, I was able to examine, compare and categorize responses of pre-service teachers. All the responses were coded by two special education doctoral students, separately. Open, axial, and selective coding were used to create the main themes in the responses of pre-service teachers.

#### 4. FINDINGS

Q.1. What are the general perceptions of pre-service special education teachers about giftedness?

To investigate pre-service special education teachers' general perceptions of giftedness, pre-service teachers were asked to report on characteristics of gifted students. Inductive method was used to create the themes. By using inductive method, total 84 codes were created. These codes were categorized under four general themes/categories (see Table 2). Academic characteristics of gifted students, cognitive characteristics of gifted students, social and interpersonal characteristics of gifted students, and barriers for gifted identification were four main themes/categories of the first question.

**Table 2.** Codes and Themes

Themes			
Academic	Cognitive	Social/ Interpersonal	Barriers for Identification
Extreme ease	Advanced thinking	Helping others	Only work sample
Completes quickly	Complex thought	Confidence	Not knowing students
Without struggle	Far exceed	Leadership	Undirected
Completing complex tasks	Reasoning	Compassion	Negative behavior
Answering multiple questions	Higher level of thinking		Bored with curriculum
Answering in a complex way	Advanced intelligence		High SES
Constantly raising hand	Thinking process		White cultural comfort
Asking complex questions	Deeper connection		Problem in reading
Come up with hypothesis	Above developmental level		Having LD
Come up with solution	Highly motivated		Only IQ test
Connect the material	High IQ		Standards for White
Explain relationships	High creative thinking		
Higher in reading	Cognitive proficiency		
Multi-function tasks	Critical thinking		
Highly organized	Analytical thinking		
Engaged	Unique		

Perform well	Challenging
Present the work	Great judgment
Understand the curriculum	
Above grade level	
Needs extra class	
Oral expression	
Grilling to it	

---

### Academic Characteristics of Gifted Students

Forty of the codes out of the 84 codes were related to the academic characteristics of gifted students. Extreme ease with the assigned work, completes quickly, completes work without struggle, asking complex questions, come up with hypothesis, complete multi-function tasks, and present their work were some of the codes created under this theme. For instance, Participant 1 explained academic characteristics of gifted students with the following sentences:

“I believe there are many characteristics that indicate a child is gifted. The first noticeable I think would be if a student has extreme ease with the assigned work, completes it quickly, or without struggle”.

By using these words, participant 1 explained her ideas about academic characteristics of gifted students with their ability do the homework and assigned work easily. Although she mentioned that here were many characteristics, she chose to state academic characteristics of gifted students with very basic and observable ones instead of complex and abstract academic characteristics. Participant 2 also explained her ideas about academic characteristics of gifted students in a similar way and emphasized similar activities:

“If they are always raising their hands in class, answering questions all the time, participate, and good with their homework”.

Although these characteristics can be observed in most of the gifted students, these characteristics might not be applicable to the twice- exceptional students. For instance, students who have dyslexia might not be able to raise their hands and answer the questions in a reading passage, but they might have a critical thinking ability in another subject. Because of that reason, accepting raising hands and answering questions as academic characteristics of gifted students might be problematic for twice exceptional students.

When pre-service teachers stated academic characteristics of gifted students, they sometimes compared gifted students with their peers to explain the academic characteristics of gifted students. The following quotes show how pre-service teachers compared gifted students with other students while explaining their academic characteristics:

“If the student displays an unexpected high ability in something comparison to their peers” (Participant 3).

“Performs significantly above grade level on academic tasks” (Participant 4).

Academic characteristics mentioned by these participants match with the academic characteristics of gifted students in the literature (Renzulli, 2005). Most of the scholars also explain academic characteristics of gifted students by making comparisons with other students.

As a result, academic characteristics of gifted students mentioned by special education pre-service teachers were consistent with the literature. Some pre-service teachers preferred to focus on basic and observable academic characteristic, others preferred to explain these characteristics which can be observed in classroom settings. Couple other participants explained academic characteristics

of gifted students by making comparison with their peers. Although they mentioned different characteristics of gifted students, most of these characteristics were consistent with the academic characteristics of gifted students in the literature.

### **Cognitive Characteristics of Gifted Students**

Twenty-one of the codes were related to the cognitive characteristics of gifted students (Table 2). Advanced thinking, complex thought, higher level understanding, deeper connections, connection with previous topics, high IQ, and critical thinking were some of the codes created under this theme. For instance, Participant 1 explained the cognitive characteristics of gifted students with following sentences:

“I think the most important characteristic to recognize a child by is higher level of thinking. Even though high work quality and ease with the curriculum are the most obvious indicators, I believe thinking process and advanced intelligence are the most important because many factors can impact a student’s work quality”.

She also emphasized that cognitive characteristics of most gifted students might not be visible or reflected in their work if they are not guided correctly with the following statements:

“I think that these characteristics are the most important because many gifted students do not present in traditional or obvious ways. Many gifted students can appear as the opposite of exceptional based on work samples alone. I believe that truly gifted individuals possess higher level thinking, reasoning and cognitive ability that undirected will not present in grades alone. Teachers need to know their students and all their abilities to best access them. I think this is crucial because a gifted child that is not recognized can end up a poor performer or behavioral problem in school.”

Participant 8 also listed that critical thinking and analytical thinking was the two most important cognitive characteristics of the gifted students.

With these three quotes, participant 1 and 8 expressed that cognitive characteristics of gifted students are more important than academic characteristics of gifted students. As participant 1 explained, although academic characteristics of gifted students are more visible and observable, these characteristics might misguide the teachers when they are working with students who are not presenting their works and students who have some disability labels. As she explained, to have a more accurate referral and better identify gifted students, teachers should know their students very well, not only their work skills but also their thinking skills. Students who are not coming from mainstream culture and twice-exceptional students might not be able to show their cognitive potential if they are not guided correctly by their teachers. Cognitive characteristics become really important when working with students who are from culturally diverse backgrounds and twice-exceptional ones.

### **Social – Interpersonal Characteristics of Gifted Students**

Although social and interpersonal characteristics of gifted students were not mentioned very frequently in pre-service teachers’ responses, four of the codes were related to social and interpersonal characteristics of gifted students. Helping others, confidence, leadership, and compassion were the four codes created under this theme. Participant 2 mentioned that “And like they do a lot of staff, answer questions, always try to about it and they always helping someone else”. Participant 12 also defined characteristics of gifted students based on social-interpersonal characteristics of gifted students with following statement: “I interpret a student as gifted if they demonstrate confidence, leadership, compassion, and great judgment”.

Social characteristics such as helping others, confidence, leadership, and compassion are not very commonly mentioned social characteristics of gifted students in the literature. Usually when gifted students are described based on social characteristics; some negative descriptors such as

nerdy, unsocial, and not engaging with peers are used (Akar & Akar, 2012; Sak, 2011). The social characteristics of gifted students described by special education pre-service teachers in this study were more positive because these pre-service teachers had credentials about gifted students and their education.

### **Barriers for Gifted Identification**

Although the main focus of my study was characteristics of gifted students, pre-service special education teachers' responses created this unexpected theme. Teachers stated that some characteristics of gifted students have been misinterpreted or teachers' limited knowledge sometimes misguided teachers and prevented identification of gifted students. This theme created based on nineteen codes that reported by pre-service teachers (Table 2). Deciding only based on work sample, not knowing students, behavior problems, and boredom with grade level were some of the codes related to that theme. Special education pre-service teachers believe that because of limited knowledge of teachers on giftedness and their lack of knowledge about their own students, teachers do not refer students with behavioral problems for gifted identification. For instance, Participant 1 stated that problematic behaviors of the students are always considered as a special need problem, but it might misguide the teacher unless the teacher investigate this problem carefully. Participant 1 stated that "It is pretty common especially in early grades to find "fit in said" behavior problems that are getting up a lot, distracted and if you actually evaluate and asses them, all evaluation for special education and find them that they know the curriculum and at developmental level, developmental age like express I understand, I m bored and those will create behavior problem. Normally we have behavior kid you will assess them to find out there is something going on and often to find out that they are exact". Also couple other pre-service teachers also stated their concerns regarding the behavior problem and their misinterpretation with the following statement:

"These students may become bored with grade-level content (Participant 4)".

"Sometimes gets bored with general education (Participant 6)".

"Boredom with grade-level material (Participant 8)".

Another barrier for gifted identification stated by Participant 1 was related to the standards of gifted identification. Participant 1 stated that "I think there are certain characteristics that can be easily associated with high socio-economic status white students. Because the characteristics of giftedness was mostly standardized and based on characteristics of high socioeconomic white students, these students more recognized as gifted. Then you should not use these characteristics or criteria to identify students from other cultures because it is based on characteristics of high socioeconomic white students. These students have cultural comfort; therefore, they complete the assignment and actively participate, because the criteria for giftedness were based on how high socioeconomic White students behave. Standards for giftedness are very comfortable for White child".

This quote refers to a persistent and controversial problem that has been exist in the field of gifted education, underrepresentation of minority students (Ford, 1998; Jenkins, 1936). Underrepresentation of minority students in programs educating gifted students have started to be discussed with Jenkins' study. According to Jenkins, African-American students were not equally represented in gifted programs although they had high IQ scores to be placed in these programs. Since that time the problem of underrepresentation have been discussed in the literature and yet not have been solved (Ford, 1998). Reliance on standardized achievement and aptitude tests; using only one method of assessment; using traditional assessment methods for placement of CLD students (Ford, 1998; Van Tassel-Baska, 2002); existence of different definitions of giftedness; using different identification procedures (Clasen, Middleton, & Connell, 1994; Maker, 1996); test bias,

selective referrals, and reliance on deficit-based paradigms (Frasier, Garcia & Passow, 1995) have been considered reasons for underrepresentation of minority students in programs for gifted learners. Parallel to what have been discussed about underrepresentation of minority students in the literature, participant 1 believed that gifted education was standardized based on White culture; therefore, students from minority groups could not be identified and equally represented in gifted programs with these White culture's standards.

Q.2. To what extent special education pre-service teachers' perception of giftedness affected by their gender?

Although we had six female pre-service special education teachers in our study, we only had two male pre-service teachers. Because these two male participants only filled out the questionnaire and their responses to questionnaire were really short, we could not compare male and female pre-service special education teachers' perceptions of giftedness. Although we had enough data to investigate female pre-service teachers' perception of giftedness, because of limited data related to male pre-service special education teachers' perception of giftedness, we could not compare two gender groups.

Q.3. To what extent pre-service special education teachers' perceptions of giftedness is affected by their credentials in education of the gifted?

In this question, special education pre-service teachers' perceptions of giftedness were investigated by sorting those pre-service teachers in two groups, pre-service teachers who have credentials in education of gifted students and who do not. All codes and themes created for the first question were sorted in a different way to compare pre-service teachers who had credential in gifted education and who did not. Participant 1, 6, and 9 were the pre-service teachers who had credential in education of gifted students. All the other participants did not have any credentials in education of gifted students.

Pre-service teachers who had credentials in gifted education mostly focused on academic and cognitive characteristics of gifted students. Out of 46 codes created based on responses of pre-service teachers who had credentials in gifted education, 30 of them were related to academic and cognitive characteristics of gifted students. The other 16 codes were related to barriers for gifted identification. Interestingly, none of those pre-service teachers talked about social characteristics of gifted students. Those pre-service teachers mostly focused on academic and cognitive characteristics of gifted students and barriers for identification of gifted students.

On the other hand, in responses of pre-service teachers who did not have any credentials in education of gifted students another pattern was observed. Out of 43 codes created based on responses of those pre-service teachers, 28 of them were related to academic and cognitive characteristics of gifted students. 10 codes were related to social/ interpersonal characteristics of gifted students and only 4 codes were related to barriers for gifted identification. Both groups of pre-service teachers mostly focused on academic and cognitive characteristics of gifted students. The reason for this similarity lay in pre-service teachers' identification history. In both groups there were some pre-service teachers who were identified as gifted during their school life. In group who had credentials in gifted education, participants 1 and 6 were identified as gifted during their school life. In non-credential group, participants 3, 8, and 12 were identified as gifted during their school life. Although both group of pre-service teacher groups focused mostly on academic and cognitive characteristics of gifted students, the biggest difference between these two groups was in social characteristics of gifted students and barriers for gifted identification.

While pre-service teachers who had credentials were focusing on barriers for gifted identification after cognitive and academic characteristics, pre-service teachers who did not have credentials were focusing more on social characteristics of gifted students after cognitive and



academic characteristics of these students. The barriers for gifted identification were more important for pre-service teachers who had credentials in education of gifted students.

Q.4. To what extent special education pre-service teachers' perception of giftedness is affected by their giftedness statuses?

For this question special education pre-service teachers' responses were sorted in two groups, the ones who identified as gifted during school life and the ones who did not identified as gifted. Participants 1, 3, 6, 8, and 12 were the pre-service teachers who were identified as gifted in their school life. Participants 2, 4, and 9 were the members of the group who were not identified as gifted during their school life. For gifted group 55 codes and for non-gifted group 29 codes were created based on responses of pre-service teachers.

The patterns in responses of gifted group were very similar to patterns in question 3. Gifted group mostly focused on academic and cognitive characteristics of gifted students. Out of 55 codes, 40 of them related to academic and cognitive characteristics of gifted students. 10 codes were related to barriers for gifted identification and only 5 codes were related to social/interpersonal characteristics of gifted students. Similar to responses in question 3, gifted pre-service teachers first paid more attention to academic and cognitive characteristics of gifted students and then barriers for gifted identification. Only one of the gifted pre-service teachers, participant 12, focused on social characteristics of gifted students. Another interesting pattern was about necessity of gifted education and problems of gifted students with general education in responses of gifted pre-service teachers. For instance participant 3 said that the students must be excelling so much that their instruction is no longer appropriate. Similarly participant 6 also mentioned that they [gifted students] would need an extra class, more/ different work. Participant 8 also expressed her ideas about necessity of gifted education programs with following words: "Gifted education should exist to help these kinds of students [gifted students] to advance"

Based on the non-gifted pre-service teachers' responses 25 codes were created. With comparison to gifted group, pre-service teachers in this group talked less about cognitive and academic characteristics of gifted students. Only 19 of the codes were related to academic and cognitive characteristics of gifted students. 5 codes were related to barriers for gifted identification and 1 code was related to social/ interpersonal characteristics of gifted students.

Although both groups provided similar responses in this question, there were two main differences between these two groups' responses. Gifted pre-service teachers more focused on academic and cognitive characteristics of gifted students and more often mentioned these characteristics. The intensity of academic and cognitive characteristics of gifted students was easily observed in responses of gifted pre-service teachers. The other difference was about the instruction provided for gifted students. The gifted group more often mentioned the necessity of gifted education and how gifted students get bored with general education. The reason for this difference might be caused from their own experiences. Because these pre-service teachers were identified as gifted in their school life and experienced some problems from first hand, they were able to mention their problems with general education.

Another interesting finding was observed when comparing the responses of pre-service teachers who had credentials in gifted education and pre-service teachers who were identified as gifted in their school life. Both pre-service teachers who had credentials in gifted education and pre-service teachers who were identified as gifted in their school life mostly focused on academic and cognitive characteristics of gifted students when they were asked to define the characteristics of gifted students. In both groups, codes related to academic and cognitive characteristics of gifted students were more often observed and these codes made up around 80% of the codes when these two groups were asked to define characteristics of gifted students. These results indicate that being identified as gifted is as much as important to attend some gifted education classes to gain

knowledge about characteristics of gifted students. Based on these results, we can conclude that encouraging gifted students to pursue a teaching carrier will help future gifted students to be easily identified and to be understood by their teachers. More scholarship should be provided to gifted students who want to pursue a career in teaching profession for the benefit of potential gifted students who are attending schools.

## 5. DISCUSSION, CONCLUSION, AND RECOMMENDATIONS

Special education pre-service teachers explained their perceptions of giftedness by responding the open-ended questionnaire and interview questions. Special education pre-service teachers were asked to explain characteristics of gifted students. Based on their responses four general themes were created. Academic, cognitive, and social/interpersonal characteristics were three main characteristics were mentioned by pre-service teachers. Special education pre-service teachers also mentioned their concerns regarding to barriers for gifted identification. Those characteristics of gifted students described by pre-service teachers helped us to understand their perception of giftedness. Based on the results of the third and fourth question, we can conclude that having credentials in gifted education was as effective as being gifted, because pre-service teachers who had credentials in gifted education and the ones who were identified as gifted during school life provided similar responses about characteristics of gifted students. Increasing number of classes about gifted education will help future teachers to easily recognize gifted students and guide them to receive appropriate education. Furthermore, increasing scholarships for gifted students in teaching programs also will increase number of teachers who could easily recognize potential gifted students.

## REFERENCES

- Akar, İ. & Akar, Ş. Ş. (2012). İlköğretim okullarında görev yapmakta olan öğretmenlerin üstün yetenek kavramı hakkındaki görüşleri [Primary school in-service teachers' perceptions of giftedness]. *Kastamonu Education Journal*, 20, 423-436.
- Alvidrez, J. & Weinstein, S. R. (1999). Early teacher perceptions and later student academic achievement. *Journal of Educational Psychology*, 91(4), 731-746
- Bégin, J., & Gagné, F. (1994). Predictors of general attitude toward gifted education. *Journal for the Education of the Gifted*, 18 (1), 74-86.
- Bianco, M., Harris, B., Garrison-Wade, D., & Leech, N. (2011). Gifted girls: Genderbias in gifted referrals. *RoeperReview: A Journal on Gifted Education*, 33(3), 170-181. <https://doi.org/10.1080/02783193.2011.580500>
- Bianco, M & Leech, L. N. (2010). Twice-exceptional learners: effects of teacher preparation and disability labels on gifted referrals. *Teacher Education and Special Education*, 33(4), 319-334.
- Clasen, D. R., Middleton, J. A., & Connell, T. (1994). Assessing artistic and problem-solving performance in minority and nonminority students using a nontraditional multidimensional approach. *Gifted child quarterly*, 38(1), 27-32. doi: 10.1177/001698629403800104
- Creswell, W. J. (2014). *Research design: Qualitative, quantitative and mixed methods approaches (4th ed.)*. Thousand Oaks, CA: Sage Publications.
- Davis, G. A., Rimm, S. B. (2004) *Education of the gifted and talented (5th ed.)* Needham Heights, MA: Allyn & Bacon.
- Elhoweris, H., Mutua, K., Alsheikh, N., & Holloway, P. (2005). Effect of children's ethnicity on teachers' referral and recommendations decisions in gifted and talented programs. *Remedial and Special Education*, 26, 25-31.

- Endepohls- Ulpe, M., & Ruf, H. (2005). Primary school teachers' criteria for the identification of gifted pupils. *High AbilityStudies*, 16 (2), 219-228
- Ford, Y. D. (1998). The underrepresentation of minority students in gifted education: Problems and promises in recruitment and retention. *The Journal of Special Education*, 32(1), 4-14. doi: 10.1177/002246699803200102
- Fraiser, M. M., Garcia, H. J., & Passow, H. A. (1995). A review of assessment issues in gifted education and their implications for identifying gifted minority students. The National Research Center on the Gifted and Talented.
- Glaser, G. B. & Strauss, L. A. (1967). *The discovery of grounded theory: Strategies for qualitative research*. Chicago, IL: Aldine Publishing Company.
- Grantham, T. C. (2002). Underrepresentation in gifted education: How did we get here and what needs to change? *Roeper Review*, 24, 50–51.
- Hallahan, D. P., Kauffman, J. M., & Pullen, P. C. (2009) *Exceptional learners* (11th ed.) Needham Heights, MA: Allyn & Bacon.
- Hunsaker, S. L. (1994). Creativity as a characteristic of giftedness: Teachers see it, then they don't. *Roeper Review*, 17 (1), 11-15
- Jenkins, M. D. (1936). A socio-psychological study of Negro children of superior intelligence. *Journal of Negro Education*, 5, 175-190
- Maker, C. J. (1996). Identification of gifted minority students: A national problem, needed changes and a promising solution. *Gifted Child Quarterly*, 40, 41-50. doi: 10.1177/001698629604000106
- Michener, L. A. (1980). *A survey of the attitudes of administrators, teachers and community members toward the education of gifted children and youth* (Educational doctorate dissertation). Retrieved from Dissertations&Theses: Full Text. (Publication No. AAT 8109558).
- Miller, E.M. (2009). The effect of training in gifted education on elementary classroom teachers' theory- based reasoning about the concept of giftedness. *Journal for the Education of the Gifted*, 33 (1), 65-105.
- Morris, S. K. (1987). Student teachers' attitudes toward gifted students. *Creative Child and Adult Quarterly*, 12, 112-114
- Persson, R. S. (1998). Paragons of virtue: Teachers' conceptual understandings of highability in an egalitarian school system. *High AbilityStudies*, 9 (2), 181-196.
- Peterson, J., & Margolin, L. (1997). Naming gifted children: An example of unintended "reproduction." *Journal for the Education of the Gifted*, 21 (1), 82–100.
- Powell, T., & Siegle, D. (2000). Teacher bias in identifying gifted and talented students. The National Research Center on the Gifted and Talented Newsletter, Spring, 13-15.
- Renzulli, J. S. (2005). The Three-Ring Conception of Giftedness: A Developmental Model for Promoting Creative Productivity. In R. J. Sternberg & J. E. Davidson (Eds.), *Conceptions of giftedness* (pp.246–279). Cambridge University Press. <https://doi.org/10.1017/CBO9780511610455.015>
- Sak, U. (2011, April). Prevalence of misconceptions, dogmas, and popular views about giftedness and intelligence: a case from Turkey. *High Ability Studies*, 22, 179-197.

- Siegle, D. & Reis, M. S. (1998). Gender differences in teacher and student perceptions of gifted students' ability and effort. *Gifted Child Quarterly*, 42 (1), 39-47
- Siegle, D. (2001). Teacher bias in identifying gifted and talented students. Paper presented at the annual meeting of the Council for Exceptional Children, Kansas City, MO.
- Siegle, D., Moore, M., Mann, L R., & Wilson, E H. (2010) Factors that influence in-service and pre-service teachers' nominations of students for the gifted and talented programs. *Journal for the Education of the Gifted*, 33 (3), 337-360.
- Van Tassel-Baska, J., Patton, J., & Prillamon, D. (1991). Gifted youth at risk: A report of a national study. Reston, VA: The Council for Exceptional Children.
- Van Tassel-Baska, J. (2002). Using performance tasks in the identification of economically disadvantaged and minority gifted learners: Findings from project STAR. *Gifted Child Quarterly*, 46(2), 110-123.

### Appendix A: Questionnaire about Gifted Characteristics

Please respond to the following questions. Put an "X" into the appropriate box.

- a. What is your gender?  
 Male                       Female
- b. How do you define your cultural background?  
 African American     American Indian     Asian American  
 Hispanic                       White
- c. Have you ever taken any classes related to gifted students?  
 Yes                               No  
 (If yes) How many units? .....
- d. Have you ever been identified as gifted during your school life?  
 Yes                               No

**Question1:** What characteristics of a student makes you think that this student is gifted? Feel free to list or explain.

**Question 2:** Which of the characteristics that you identified above seem the most important to recognize a child as gifted?

**Q.3:** Why do you think these characteristics are the most important ones to recognize a child as gifted?

### Appendix B: Interview Questions

**Q.1.** In your response you mentioned that X characteristic of a student makes you think that this student is gifted, could you please explain it a little bit more?

**Q.2.** Why do you think that X characteristic is related to giftedness?

**Q.3.** How did you come up with the idea that X characteristic and giftedness is related? Did you read about this relationship before or is this your personal opinion?

**Q.4.** Which students will most probably have this characteristic regarding gender?

**Q.5.** Which students will most probably have this characteristic regarding race?

**Q.6.** What other characteristics you did not mention in your response makes a student gifted?