*Experience Abroad*
*Чуждестранен опит*

# THE EFFECTIVENESS OF A SINGLE TEST APPROACH IN IDENTIFYING POTENTIALLY GIFTED YOUNG CHILDREN

**Adile Gulsah Saranli**
*TED University*

**Abstract.** The aim of this research is to understand the effectiveness of the Basic Aptitude Test in identifying very young potentially gifted children. Early intervention, including early identification, is crucial while helping potentially gifted children. Identification should ideally include multiple pedagogical methods such as; observation, parent and teacher interviews, conversations with the child and portfolio examples. However, because of the long identification process, these steps may sometimes be skipped, with all steps compacted in a single test in isolation. For example, within the last few years, there has been attempts in the Turkish education system to identify very young children with the help of only "The Basic Aptitude Test", labeling 5 or 6 year old children as gifted or not gifted. In this research, we attempt to show that this is a more complicated and very fragile process and using only a single test can result in a substantial number of potentially gifted children being left unidentified. During this research, the Torrance Creativity Test, Tema-3 Early Math Test, Tifaldi Turkish Language Development Test and at last Basic Aptitude Test (5-7) were all applied to 42 preschool age children (age 6) in Ankara, the capital city of Turkey within a one year period. Informed consents were collected from parents, giving permission to work with the children. This research showed that relying on a single test alone can mislead educators and parents. Results revealed that 11 out of the 42 young children were left unidentified based on results from the Basic Aptitudes Test alone. These findings will provide a scientific basis to inform parents, teachers and governments about the crucial and difficult nature of trying to find the most able pupils, showing them which methods may be appropriate for the identification of potentially gifted in early ages.

*Keywords*: early childhood, high potential, gifted children

## Introduction

Identifying preschool children with high potential is a very difficult task. Because of the age and the developmental processes of children in this age group, increased focus on the identification process for these children is becoming much more important. Using multiple resources and collecting sufficient data about the

child is emphasized in every resource related to the identification of preschool children with high potential (Cutts & Moseley, 2004; Cohen, 1989; Johnsen, 2004; Louis & Lewis, 1992 Sak, 2014; Silverman, 1998; Wolfle, 1989; Wortham, 2005; Yang, 2009). On the other hand, there is always the possibility of reaching incorrect conclusions since the development of preschool age children constantly changes and evolves. If we only use test-driven methods we may incorrectly characterize potential giftedness. However, it is often observed that early intervention, including early identification is particularly important in helping potentially gifted children (Silverman, 1992; Stile, Kitano, Kelley, & LeCrone, in press). Identification should include pedagogical methods such as; observation, parent and teacher interviews, conversations with the child and portfolio examples. (Karnes & Johnson, 1991; Kitano, & Kirby, 1986). However, because of the long identification process, these steps may sometimes be ignored and with all steps compacted in a single test in isolation. In Turkish education system, there has been some recent attempts to screen very young children for giftedness potential with the help of only The Basic Aptitude Test. In light of these observations, the main goal of this research is to characterize and understand the effectiveness of the Basic Aptitude Test in the identification of very young potentially gifted children in Turkey.

During the preschool period, the development process for children in the 0-8 age range is rather fast (Ari, 2003). This rapid pace of development requires us to carefully ensure that the developmental properties of these children are compatible with the normal standards for their age. If the developmental progress for a child is found to be either faster or slower than the normal standards for his/her age, it becomes necessary to consider appropriate differentiation of educational approaches (Metin, 2000). In the absence of early identification, gifted children may face an increased risk for underachievement. Research in this area shows that these children tend to lose interest in their academic studies, and even have a tendency to hide their talents in order to appear similar to their peers exhibiting normal development patterns (Siegle & McCoach, 2005). If gifted children are determined during the preschool period, where development is fastest, their home environment can be arranged in a way that is suitable for their interests and talents, appropriate educational programs can be developed and their parents and teachers can be informed and educated in a timely manner. All these precautions and support mechanisms are critically important in ensuring that gifted children can attain their highest intellectual, physical, social and emotional potentials (Daglioglu, 2010; Karnes & Johnson, 1991; Silverman, 1992)

As the importance of preschool education is increasingly being recognized, the identification and education of gifted children during this period is also becoming an important problem that needs to be properly addressed (Pfeiffer, 2002; Pfeiffer & Jarosewich, 2003; Pfeiffer & Petscher, 2008). Researchers observe that identification mechanisms should incorporate much more than a single criterion or

assessment method (Johnsen, 2004; Wortham, 2005). Important information about gifted children can be obtained from interviews, developmental lists and anecdotal records (Louis & Lewis, 1992; Silverman, 1998); observations, sample projects and scales to evaluate areas of interest (Cohen, 1989; Wolfle, 1989) as well as test scores, measurements of performance or results from different responsibilities assumed by the child. Various studies on special education for early childhood and the assessment of gifted children also support the use of multiple measurement methods (Karnes, Shaunessy & Bisland, 2004; NAGC-CEC, 2006; Sandall, Hemmeter, Smith & McLean, 2005).

Progress in Turkey related to gifted children increased in speed following the establishment of specialized schools called "Science and Art Centers" (BILSEM) in 1992. The education of preschool children was among the initial goals of these BILSEM schools, but no progress has yet been made in this area. A review of existing studies reveals that the majority of related work focuses on gifted children in primary school or middle schools. There are very few studies related to gifted children in the preschool period and they mostly focus on their developmental properties and proposals for educational programs and their application (Alemdar, 2009; Baykoç-Dönmez & Kurt, 2004; Baykoç-Dönmez & Bozkurt, 2008; Metin, Özbay & Dağlioğlu, 2008; Özbay & ark., 2009; Selçuk Bozkurt, 2007; Suveren, 2006). As observed and evidenced by the small volume of the literature related to the identification of gifted preschool children, one of the major problems in this area is the lack of a sufficiently wide range of measurement and assessment tools and scales (Daglioglu & Metin, 2003; Yakmaci Güzel, 2004). In recent years, there has been a number of well-intentioned and small-scale attempts to overcome this problem within European Union funded projects as well as a number of private schools but these have not been sustainable (Baykoç-Dönmez & Özekin, 2008; Metin et. al., 2008; Grant Program for Strengthening Preschool Education, 2009). In this context, it has been observed that in Science and Art Center schools (BILSEMs), whose original mission includes the goal of identifying and educating preschool gifted children, the TKT 5 – 7 Basic Abilities test has been used for identification purposes despite uncertainties in its validity and reliability (MEB, 2010). In light of all these observations, this study aims to determine which measurement methods are valid and reliable in correctly determining giftedness during the preschool period based on proper pedagogical methods. In particular, the results presented in this study attempt to establish the effectiveness of the TKT 5 – 7 Basic Abilities test in successfully determining gifted children during their preschool years through an assessment of the consistency between the TKT 5 – 7 results and those of the Torrance Creativity test, Tifaldi Expressive and Receptive Language Development tests and the Tema-3 Early Mathematical Development test. These results will not only demonstrate the application of multiple assessment methods and tools for identifying gifted preschool children, but also provide a scientific analysis of

results from a specific measurement method preferred by the Turkey's Ministry of Education, likely to be used as an identification tool both in the short and medium terms for preschool gifted children.

**Method**

The researcher applied the Torrance Creativity Test, the Tema-3 Early Math Test, the Tifaldi Turkish Language Development Test and finally the Basic Aptitude Test (5-7) to 42 preschool age children (age 6) in Ankara, the capital city of Turkey within a one year period. In this study, the consistency between the Basic Aptitudes Test results and the remaining tests was examined. To this end, the relation between these variables was examined with the help of the descriptive review model (Punch, 2005). In summary, the research questions addressed by this research were as follows;

1. Are the results of the TKT 5 – 7 Basic Abilities Test (BAT) effective in determining 6 year old pre-school children's Mathematical Ability?

2. Are the results of the TKT 5 – 7 BAT effective in determining 6 year old pre-school children's Creativity?

3. Are the results of the TKT 5 – 7 BAT effective in determining 6 year old pre-school children's Language Ability?

**Working Group:** The population for this research was chosen from the Cankaya district of Ankara province, including 6 year-old children attending Independent Ministry of Education kindergartens. Prior to the beginning of the study, an official permission was first obtained from the Ankara Cankaya branch of the Ministry of Education. A volunteer Independent Ministry of Education kindergarten with a sufficient number of 6 year-old children (60) was chosen from within this district. The principal, the teachers and the parents of all children were all willing to participate in the study all the informed consents are signed by them. Even though all 60 children were included in the beginning of the study, only 42 students were included in the results because of incomplete attendance for the remaining subjects.

Data Gathering Instruments

**Torrance Test of Creative Thinking:** Torrance's Tests of Creative Thinking developed by Torrance at 1966 and it psychometrically measure divergent thinking and other problem-solving skills (Aslan, 2001). The original purposes of the test were to understand the strengths of students, to conduct research and experimentation, and to provide guidance for instructional planning. The reliability and validity of the TTCT has made Torrance nationally and internationally known. The TTCT test has been conducted in more than 50 languages around the world. There are verbal and figural parts of this test. TTCT – Verbal: There are five activities in this part of the test, including ask-and-guess, product improvement, unusual uses, unusual questions, and just suppose activities. The stimulus for each task includes a picture to which subjects respond in writing. TTCT – Figural: There are three activities in this part of the test, including picture construction, picture completion, and repeated

figures of lines or circles. Each task has a limited time allowed for its completion and drawing skills or abilities are not important for any of the tasks (Aslan, 2001).

**TEMA-3: Test of Early Mathematics Ability:** TEMA-3 measures the mathematics performance of children in the age ranges of 3-0 and 8-11 and is also useful with older children with learning problems in mathematics. It can be used as a norm-referenced measure or as a diagnostic instrument to determine specific strengths and weaknesses. Thus, the test can be used to measure progress, evaluate programs, screen for readiness, discover the bases for poor school performance in mathematics, and identify gifted students, and guide instruction and remediation. The test measures informal and formal (school-taught) concepts and skills in the following domains: numbering skills, number-comparison facility, numeral literacy, mastery of number facts, calculation skills, and understanding of concepts. It has two parallel forms, each containing 72 items. The all new standardization sample is composed of 1,219 children. The characteristics of the sample approximate those in the 2001 U.S. Census. Test results are reported as standard scores, percentile ranks, and age and grade equivalents. Internal consistency reliabilities are all above .92; immediate and delayed alternative form reliabilities are in the .80s and .90s. In addition, many validity studies are described (Erdogan & Baran, 2006).

**TKT 5-7 Basic Aptitudes Test: The** Basic Aptitudes Test is a group ability test for 5 to 7 year old children. It has three different forms for 5 – 7 ages, 7 – 11 ages and 11 – 17 ages and was developed by Thurstone and Thurstone. The form for 5 – 7 year old children is widely used by Guidance Research Centers (RAM) in Turkey for pre-selection of gifted children. The TKT 5 – 7 test has four different parts, including language, differentiation, number, and place and has a total of 130 items (MEB, 1994).

**Turkish Expressive and Receptive Language Test (TIFALDI):** The TIFALDI Expressive and Receptive Vocabulary Scale was developed for the Turkish Language and norm data was collected from a nationally representative sample. The TIFALDI-RT has high reliability and validity scores and hence can be used to assess 2 to 12 year-old children's receptive vocabulary skills. For the Receptive Vocabulary Sub-Scale (TIFALDI-RT) 242 concrete and abstract words were chosen from word frequency lists and a comprehensive Turkish Dictionary. Pilot data was collected from 648 children aged 2 to 13 from Ankara, and norm data was collected from a nationally representative sample of 3755 children. Item analysis (item difficulty, discrimination and distractor) was carried out on this pilot data and based on the results, the total item number was reduced to 157. Furthermore, three parameter item analyses (IRT) were carried out on the norm data by using BILOG-MG, and the results indicated that the TIFALDI Receptive Vocabulary Sub-Scale could be reduced to 104 items to assess 2 to 12 year-old children's receptive vocabulary. Test-retest and internal consistency reliabilities were calculated for the whole sample and age groups separately, and all the coefficients were high. For the validity, the relationship between the WISC-R and Ankara Developmental Screening Inventory (AGTE) and Receptive Vocabulary

Sub-Scale were investigated. Once again, the TIFALDI Receptive Vocabulary Sub-Scale scores were found to be significantly related to WISC-R and AGTE scores (Kazak-Berument & Guven, 2013).

**Research Process**

For the first stage of this study, the Tema-3 Early Mathematics Ability Test, the TIFALDI Turkish Expressive and Receptive Language Test, the Torrance Creativity Test and the TKT 5 – 7 Basic Abilities Test were all applied to the 60 students in the subject group of 6 year-old children. Prior to the administration of these tests, informed consent forms were collected from all parents securing their permissions for the study. In the second stage, following the completion of all tests and observation forms, results from all tests were computed and finalized. In the final stage of the study, the consistency between the results of the TKT 5 – 7 Basic Abilities Test and the remaining three tests as well as the observations forms were analyzed, with the results presented in the next findings section.

**Findings**

In this section, findings related to the comparison of the TKT 5 – 7 Basic Aptitude Test results and results from the other tests for 42 preschool students who have completed all tests are presented.

**Table 1.** Results about the Identification Ranges of the Basic Abilities and the TEMA-3 Math Ability Test

| | **Age** | **N** | **n** | **Percentage of the identification range (%)** |
|---|---|---|---|---|
| **TKT Basic Aptitudes Test** | 6 year | 42 | 3 | % 7 |
| **Tema-3 Math Ability Test** | 6 year | 42 | 5 | % 12 |

Table 1 gives the number and percentages of children who have been identified as potentially gifted based on the results of the Basic Aptitudes Test and the Tema-3 Test of Early Mathematics Ability. These results allow a comparison of the number of children that can be identified as potentially gifted through these tests. As it can be seen in the table, the Basic Aptitudes test has been able to identify only 3 of the 42 children (%7) as potentially gifted, whereas the Tema-3 Test of Early Mathematics Ability has been able to identify 5 of the same 42 children (%12) as having more advanced mathematics abilities than their peers.

**Table 2.** Results about the Identification Ranges of the Basic Abilities and the TIFALDI Language Test

| | **Age** | **N** | **n** | **Percentage of the identification range (%)** |
|---|---|---|---|---|
| **TKT Basic Aptitudes Test** | 6 year | 42 | 3 | % 7 |
| **TIFALDI Language Test** | 6 year | 42 | 8 | % 19 |

Similarly, Table 2 shows the number and percentages of children who were identified as potentially gifted based on the results of the Basic Aptitudes Test and the Turkish Expressive and Receptive Language Test (TIFALDI), allowing a comparison of the relative effectiveness of these tests for identification purposes. As it can be seen from the results in the table, the TIFALDI test was able to identify 8 of the 42 children (%19) as having more advanced language skills than their peers, compared to only 3 out of 42 children (%7) that the Basic Aptitude Test has been able to identify as potentially gifted, corresponding to a difference factor of more than 2 between the identification performances of these tests.

**Table 3.** Results about the Identification Ranges of the Basic Abilities and the Torrance Test of Creative Thinking

| | **Age** | **N** | **n** | **Percentage of the identification range (%)** |
|---|---|---|---|---|
| **TKT Basic Aptitudes Test** | 6 year | 42 | 3 | % 7 |
| **Torrance Test of Creative Thinking** | 6 year | 42 | 11 | %26 |

For the next comparison, Table 3 shows in separate rows, the number and percentages of children who were identified as potentially gifted by the Basic Aptitudes Test and those that were found to be gifted in creative abilities by the Torrance Test of Creative Thinking. Results showed that the Torrance Test of Creative Thinking was able to identify 11 out of the 42 children (%26) as gifted, a figure almost four times larger than the 3 out of 42 children (%7) that the Basic Aptitudes Test was able to identify as gifted.

**Table 4.** Unidentified Children based on the TKT Basic Aptitudes Test

| | **Number of unidentified children** | **Percentage of unidentified children** |
|---|---|---|
| **Children who identified only at the TIFALDI Language Test** | 3 | %2 |
| **Children who identified only at the Tema-3 Early Mathematical Abilities Test** | 5 | %7 |
| **Children who identified solely at the Torrance Creativity Test** | 11 | %7 |

Finally, Table 4 shows the number of children among the 42 preschool children who were not identified as gifted by the Basic Aptitudes Test, but were found to be gifted based on the results of one of the remaining three tests. This comparison shows that 3 children identified as potentially gifted by the Turkish Expressive and

Receptive Language Test (TIFALDI) were left unidentified by the Basic Aptitudes Test. Moreover, 5 and 11 children that were respectively identified as potentially gifted by the Tema-3 Early Mathematical Abilities Test and the Torrance Creativity Test were not in any way recognized by the Basic Aptitudes Test and hence were unidentified. In light of these findings, the Basic Aptitudes test was found to be least inadequate in identifying exceptional language abilities and most inadequate in identifying exceptional creative abilities. Overall, a total of 11 children who were in fact talented in one of language, mathematical and creative ability areas were left unidentified by the Basic Aptitudes Test.

**Discussion and Conclusion**

Most important developmental changes in a person's life take place during the early childhood years, which are hence very valuable from an educational perspective. In order to reach children of all types and to enable them to reach their ultimate developmental potential, these initial years in a child's life must be effectively used, laying important foundations that will be instrumental in ensuring their progress towards a successful adolescence and adulthood. In this context, these early years should also be regarded as important opportunities to address and possibly eliminate many of the risks that threaten development, eventually leading to positive effects in children's future lives as adults. Even though this is also true for gifted children, their unique attributes and traits may sometimes give the impression that they would not necessarily benefit from such early intervention efforts and additional support provided in these early years. On the contrary, increasing evidence shows that early intervention efforts would greatly help both gifted children and their parents. There are certain important issues that are immediately apparent in this context. Generally, gifted children are often quite different and ahead of their peers in both their areas of interest, as well as their learning speed. This motivates differentiation of their education for early intervention. Furthermore, gifted children often show very particular and different attributes and over-sensitivities, which sometimes even constitute a basis for their identification, which may require early intervention to cope with associated problems and issues in a timely manner. Finally, the presence of asynchronous development also results in an important set of differences for these children, further motivating early intervention and related efforts (Saranli, 2016a, Saranli, 2016b).

An important initial indicator for giftedness, particularly in preschool years, is the apparent difference between the child and their peers in one or more areas of development or areas of talent. Generally, explicit labeling of gifted children in this age group should be avoided since their development is still ongoing and they attend the same educational institutions and programs as their normally developing peers with activities and environments shared by all children. The design of very specialized educational programs that are specifically tailored for the different and more advanced needs and skills of gifted children becomes much more feasible

as part of educational institutions that are exclusive to gifted children. If such an arrangement is possible, some of the typical future problems for this group of children, including social-emotional issues and academic under-achievement, can be alleviated through specific early intervention efforts and methods (Saranli, 2016a, Saranli, 2016b).

In order to ensure that such positive environments can be created, the identification process for gifted children should be started in their early years, and using pedagogically appropriate and correct measurement tools and methods. As noted before, it is clear that correct identification of gifted children is only possible once a variety of methods, such as observations, interviews and the use of scales, have been properly applied (Cutts & Moseley, 2004; Cohen, 1989; Johnsen, 2004; Louis & Lewis, 1992 Sak, 2014; Silverman, 1998; Wolfle, 1989; Wortham, 2005; Yang, 2009). On the other hand, the reality can sometimes be different than this ideal, due to the demanding time and effort requirements and the need for a team of specialists for assessment. This tendency, however, is associated with many risks that come with trying to use results from a single test to identify potentially gifted preschool children. In fact, this study has shown that explicit reliance on a single test can mislead educators and parents in the process of finding the most able young children. This was illustrated by the results presented above, showing that 11 out of 42 young preschool children were left unidentified by a single test even though they were found to show advanced skills in one or more skill areas through additional tests. The Basic Aptitudes Test was unable to identify many children with mathematical and language talent from among the 42 children sample. In addition to these preschool children who were unidentified in these two very important areas, the most severe discrepancy was observed in the creativity area, which is particularly concerning. Considering that during the preschool period, educational programs, parents and teachers should strive to prevent children from losing their creativity skills, there is a clear risk of leaving children who are particularly gifted in this area unidentified as a result of using a single test, such as the Basic Aptitudes Test, for assessment of giftedness

In conclusion, the findings in this research provide research based evidence for governments and educators on how crucial and difficult a task it is to identify the most able pupils during their early years. The results of this research, in a way that is compatible with existing literature in this area, also supported the idea that using multiple different assessment methods for identifying potentially gifted children in early ages in much more appropriate and accurate. Otherwise, if proper identification methods are not used, children can be subject to incorrect identification of their gifts and talents. It is hoped that the results of this research will help preschool teachers working with children and their parents be better equipped to recognize and identify potential giftedness during the preschool period.

**REFERENCES**

Alemdar, M. (2009). Erken cocukluk donemindeki ustun yetenekli cocuklarin belirlenmesinde ebeveyn, ogretmen ve uzman goruslerinin karsilastirilmasi, Yayinlanmamis yuksek lisans tezi, Gazi Universitesi Egitim Bilimleri Enstitusu, Ankara.

Ari, M. (2003). Turkiye'de erken cocukluk egitimi ve kalitenin onemi. In M. Sevinc (Ed.), *Erken cocuklukta gelisim ve egitimde yeni yaklasimlar* (pp. 31 – 35). Istanbul: Morpa.

Aslan, E. (2001). Torrance Yaratici Dusunce Testi'nin Turkce Versiyonu. *M.U. Ataturk Egitim Fakultesi Egitim Bilimleri Dergisi*, *14*, 19 – 40.

Baykoc-Donmez, N. & Bozkurt, O. S. (2008, Mart). Okul oncesi donemde ogretmenleri tarafindan yasitlarina gore ustun ve ozel yetenekli olarak aday gosterilen cocuklarin gelisim ozelliklerinin incelenmesi. *Ustun Yetenekli Cocuklar II. Ulusal Kongresi Ozet Kitabi* (pp. 58), Eskisehir.

Baykoc-Donmez, N. & Kurt, Z. S. (2004). Bebeklik ve okul oncesi donemde ustun yetenekli cocuklarin ve ailelerinin yonlendirilmesi. In *Ustun Yetenekli Cocuklar Bildiriler Kitabi* (pp. 393 – 400). Istanbul: Cocuk Vakfi Yayinlari.

Baykoc-Donmez, N. & Ozekin, M. (2008, Mart). Avrupa Birligi Leonardo da Vinci Programi kapsaminda 2005 & 2007 yillari kapsaminda Ingiltere ve Iskocya'da ustun ve ozel yetenekli okul oncesi ve ilkogretim donemindeki cocuklarin tani ve degerlendirme yontemleri, egitim programlari ve aile danismanligi calismalarinin Turkiye'de uygulanabilirligi projesi. In *Ustun Yetenekli Cocuklar II. Ulusal Kongresi Ozet Kitabi* (pp. 9), Eskisehir.

Cohen, L. N. (1989). Understanding the interests and themes of the very young gifted child. *Gifted Child Today, 12* (4), 6 – 9.

Cutts, N.,E. & Moseley, N. (2004). *Ustun zekâli ve yetenekli cocuklarin egitimi.* Ismail Ersevim (Cev.). Istanbul: Ozgur Yayinlari.

Daglioglu, H. E. (2010). Erken cocukluk doneminde ustun yetenekli cocuklar. In I. H. Diken (Ed.), Erken cocukluk egitimi (s. 322 – 360). Ankara: PegemA Yayincilik.

Daglioglu H. E. & Metin N. (2003). *Anaokuluna devam eden bes-alti yas grubu cocuklar arasindan ustun yetenekli olanlarin belirlenmesi*. Ankara: Hacettepe Universitesi Ev Ekonomisi Yuksek Okulu Yayinlari No: 10, Arastirma Serisi: 10.

Erdogan, S. & Baran, G. (2006). Erken matematik yetenegi testi-3 (Tema-3)'un 60 – 72 aylar arasinda olan cocuklar icin uyarlama calismasi. Cagdas Egitim Dergisi, *31*(332), 32 – 38.

Gurpinar, N. (2006). Bilişsel degerlendirme sistemi'nin (CAS) 8 yaş grubu icin on norm calişmasi ve ustun zekali ogrencilerin bilişsel

degerlendirilmesi, Yayinlanmamis¸ yuksek lisans tezi, Istanbul Universitesi, Istanbul.
Johnsen, S. K. (2004). Making decisions about placement. In S. K. Johnsen (Ed.), Identifying gifted students: A practical guide (pp. 107 – 131). Waco, TX: Prufrock Press.
Karadağ, F. (2015). Okul öncesi dönemde potansiyel üstün zekalı çocukların belirlenmesi, Yayinlanmamis yüksek lisans tezi, Dokuz Eylül Üniversitesi, Eğitim Bilimleri Enstitüsü, İzmir.
Karnes, M. B. & Johnson, L. J. (1991). The preschool/primary gifted child. Journal for the Education of the Gifted. (3), 267 – 283
Karnes, F. A., Shaunessy, E., & Bisland, A. (2004). Gifted students with disabilities: Are we finding them? *Gifted Child Today, 27* (4), 16 – 21.
Kazak-Berument, S. & Guven, A. G. (2013). Turkce Ifade Edici & Alici dil (Tifaldi) Testi: I. Alici Dil Kelime alt testi standardizasyon & guvenilirlik gecerlik calismasi, *Turk Psikiyatri Dergisi* (24)1.
Kitano, M. K, & Kirby, D. F. (1986). Gifted education: A comprehensive view. Boston Little, Brown.
Kurt, E. (2008). Raven SPM Plus Testi 5.5 – 6.5 yas gecerlik, guvenirlik, on norm calismalarina gore ustun zekali olan ve olmayan ogrencilerin erken matematik yeteneklerinin karsilastirilmasi, Yayinlanmamis yuksek lisans tezi, Istanbul Universitesi Sosyal Bilimler Enstitusu, Istanbul.
Louis, B., & Lewis, M. (1992). Parental beliefs about giftedness in young children and their relationship to actual ability level. *Gifted Child Quarterly*, *36*, 27 – 31.
MEB. (1994). Temel kabiliyetler testi yas 5 – 7. Turkiye standardizasyonu ve norm calismasi. MEB Ozel Egitim ve Rehberlik Hizmetleri Genel Mudurlugu. Ankara.
MEB. (2010). Ustun zekalilarin/yeteneklilerin egitimi calistayi hazirlik dokumani. Ankara: MEB Ozel Egitim Rehberlik ve Danisma Hizmetleri Genel Mudurlugu Yayini.
Metin, N. (2000). Attitudes of educators toward integration. *Burdur Egitim Fakultesi Dergisi*, *1*, 161 – 232.
Metin, N., Ozbay, Y., & Daglioglu, E. (2008, June). A preliminary report on the project of identification and education of gifted and talented children in preschool. In *2nd International Conference on Special Education Ozet kitabi* (pp. 114), Marmaris, Turkey.
National Association for Gifted Children [NAGC] & Council for Exceptional Children [CEC]. (2006). *NAGC–CEC Teacher knowledge & skill standards for gifted and talented education.* Retrieved February 15, 2008 from www.nagc.org/...standards/ final%20standards%20 (2006).pdf.

Okul Oncesi Egitimin Guclendirilmesi Hibe Programi. (2009). *Avrupa Birligi & Turkiye Cumhuriyeti Hukumeti tarafından ortaklasa finanse edilen "Ben de Bir Ogrenciyim" adli proje* (Referans No: CFCU/TR 0801.06-03-109). Proje Sahibi: Tokat Bilim & Sanat Merkezi.

Ozbay, Y., Metin, N., Daglioglu, H. E., Calisandemir, F., Bencik Kangal, S. & Alemdar, M. (2009, June). Concerns and issues of inclusion teachers in Turkey. In A. A. Sipitanou & N. G. Angeloska (Eds.), *12th Inclusive Education in the Balkan Countries: Policy and Practice, Ohrid, Makedonya* (pp. 245 – 251). Greece: Publishing House.

Pfeiffer, S. I. (2002). Identifying gifted and talented students: Recurring issues and promising solutions. *Journal of Applied School Psychology, 19* (1), 31 – 50.

Pfeiffer, S. I. & Jarosewich, T. (2003). *The gifted rating scales*. San Antonio, TX: Psychological Corporation.

Pfeiffer, S. I., & Petscher, Y. (2008). Identifying young gifted children using the gifted rating scales–preschool/ kindergarten Form. *Gifted Child Quarterly, 52* (1), 19 – 29.

Punch, K. F. (2005). *Introduction to social research*. Thousand Oaks.

Sak, U. (2014). *Ustun Zekâlilar, Ozellikleri, Tanilanmalari, Egitimleri* (4. Baski). Ankara: Vize Yayinevi

Sandall, S., Hemmeter, M. L., Smith, B. J., & McLean, M. E. (2005). *The division for early childhood [DEC]-Recommended practices: A comprehensive guide for practical application in early intervention/ early childhood special education.* Longmont, CO: Sopris West.

Saranli (2016a). A neglected group for early intervention: Gifted and talented young children. In R. Efe, I. Koleva, E. Atasoy, I, Curebal (Eds.). Developments in Educational Science. St. Kliment Ohridski University Press, Sofia.

Saranli (2016b). Gifted and talented children from a child development perspective. In E. Atasoy, R. Efe, I. Jazdzewska, H. Yaldır (Eds.). Current Advances in Education. St. Kliment Ohridski University Press, Sofia.

Selcuk Bozkurt, O. (2007). Okul öncesi dönemde ögretmenleri tarafından ustun ve ozel yetenekli olarak aday gösterilen çocukların gelişim özelliklerinin incelenmesi. Yayinlanmamis yüksek lisans tezi, Hacettepe Universitesi, Saglik Bilimleri Enstitusu.

Siegle, D., & McCoach, D. B. (2005). Making a difference: Motivating gifted students who are not achieving. *Teaching Exceptional Children, 38* (1), 22 – 27.

Silverman, L. K. (1998). Through the lens of giftedness. *Roeper Review*, *20*, 204 – 210.

Silverman, L. K. (1992). The importance of early identification of gifted. *Highly Gifted Children,* 5 – 16.

Stile, S. W., Kitano, M., Kelley, P., & LeCrone, J. (in press). Early intervention with gifted children: A national survey. Journal of Early Intervention. ERIC.

Suveren, S. (2006). Anasinifina devam eden cocuklar arasindan ustun yetenekli olanlarin belirlenmesi. YayinlanmamiS yuksek lisans tezi) Bolu: Abant İzzet Baysal Universitesi, Sosyal bilimler enstitusu ilkoğretim anabilim dali.

Wolfle, J. (1989). The gifted preschooler: Developmentally different, but still three or four years old. *Young Children, 44* (3), 41 – 08.

Wortham, S. C. (2005). Assessment in early childhood education (4th ed.). Upper Saddle River, NJ: Pearson.

Yakmaci Guzel, B. (2004). Ustun yeteneklilerin belirlenmesinde yardimci yeni bir yaklasim: Dabrowski'nin asiri duyarlilik alanlari. In 1. Turkiye Ustun Yetenekli Cocuklar Kongresi Ustun Yetenekli Cocuklar Bildiriler Kitabi (pp. 349-365). Istanbul: Cocuk Vakfi Yayinlari.

Yang, Y. (2009). Identification of young, gifted children: An analysis of instruments and recommendations for practice. *Identification of Young Children, (1).*

✉ **Dr. Adile Gülşah Saranli, Assist. Prof.**
Early Childhood Education Program
Department of Primary Education
Faculty of Education
TED University
Ankara, Turkey
E-mail: gulsah.saranli@tedu.edu.tr