PERCEPTIONS OF EARLY CHILDHOOD TEACHERS TOWARDS YOUNG GIFTED CHILDREN AND THEIR EDUCATION

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Approval of the Graduate School of Social Sciences

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ABSTRACT

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The aim of the study is to investigate early childhood teachers' perceptions towards young gifted children and their self-reported needs for meeting needs of young gifted children. In order to reach this aim, interviews with 15 early childhood teachers were conducted. The interview questions were designed to explore three aspects of teachers' perceptions on young gifted children: perception on giftedness as a concept, perception on characteristics of young gifted children and perception on gifted education. The findings of the study regarding these three aspects of early childhood teachers' perceptions consistently showed that they perceive and define giftedness as a concept based on excellence in cognitive abilities of gifted children. Subsequently, cognitive characteristics which indicate high abilities in cognitive

functions are stated most to define gifted characteristics. Related with that, early childhood teachers' self reported practices in case of a gifted child in classroom consist mainly of individual studies to support high cognitive abilities of young gifted children.

The findings regarding the needs of early childhood teachers in meeting the needs of young gifted children indicate that they have low self-efficacy beliefs in handling multidimensional educational needs of gifted children. They express their need for professional development and trainings with model practices. They also express the necessity of support in terms of time, material, resources, communication, collaboration and supervision in order to be able to practice the theoretical concepts they would acquire through means of professional development.

Keywords: Early Childhood Teachers, Young Gifted Children, Teachers' Needs, Gifted Education.

ÖZ

OKUL ÖNCESİ ÖĞRETMENLERİNİN ERKEN YAŞTAKİ ÜSTÜN ZEKALI ÇOCUKLARA VE EĞİTİMLERİNE YÖNELİK ALGILARI

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Bu çalışma, okul öncesi öğretmenlerinin erken yaştaki üstün zekalı çocuklara yönelik algıları ile bu çocukların ihtiyaçlarının karşılanabilmesi amacıyla dile getirdikleri gereksinimlerinin incelenmesini amaçlamaktadır. Söz konusu amaca ulaşabilmek için 15 okul öncesi öğretmeni ile mülakat yapılmıştır. Mülakat soruları, öğretmenlerin erken yaştaki üstün zekalı çocuklara yönelik algılarının üç yönünü inceleyecek şekilde tasarlanmıştır: üstün zekalılık kavramı algısı, erken yaştaki üstün zekalı çocukların özellikleri algısı ve üstün zekalı eğitimi algısı. Çalışma sonucunda okul öncesi öğretmenlerinin algılarının söz konusu üç yönüne ilişkin elde edilen bulgular, öğretmenlerin üstün zekalılığı, çocukların bilişsel becerilerinde gösterdikleri mükemmelliğe dayalı bir kavram olarak algıladıklarını ve tanımladıklarını tutarlı biçimde göstermiştir. Bunun sonucunda, üstün zekalılık özeliklerini tanımlamak amacıyla en sık olarak üstün bilişsel kabiliyete işaret eden özellikler dile getirilmiştir. Buna bağlı olarak okul öncesi öğretmenlerinin sınıflarında üstün zekalı bir çocuk

bulunması halinde başvuracaklarını dile getirdikleri uygulamalar, temel olarak çocukların üstün bilişsel kabiliyetlerini destekleyecek bireysel çalışmalardan ibaret olmuştur.

Okul öncesi öğretmenlerinin üstün zekalı çocukların gereksinimlerinin karşılanabilmesine yönelik ihtiyaçlarına ilişkin bulgular incelendiğinde öğretmenlerin üstün zekalı öğrencilerin eğitim ihtiyaçlarının karşılanmasına yönelik öz yeterlilik algılarının düşük olduğu ortaya çıkmıştır. Öğretmenlerin üstün zekalı çocukların gereksinimlerini karşılayabilmelerine ilişkin ortaya çıkan bulgular; öğretmenlerin mesleki gelişim ve model uygulamalar içeren eğitim ihtiyacını ifade ettiklerini göstermektedir. Öğretmenler aynı zamanda mesleki gelişim araçları üzerinden edinecekleri teorik bilgileri uygulamaya dökebilmek için zaman, malzeme, kaynak, iletişim, işbirliği ve denetim yönünden destek ihtiyacını da dile getirmiştir.

Anahtar Kelimeler: Okul Öncesi Öğretmenleri, Erken yaştaki üstün zekalı çocuklar, Öğretmenlerin ihtiyaçları, Üstün zekalı eğitimi

To my parents and my love

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CHAPTER I

INTRODUCTION

1.1. Background of the Study

Giftedness has been a rising issue in the realm of education. Gifted children are studied in the area of special education. Special education is concerned with children who have special needs. Children with special needs have to be identified and intervened as early as possible. The importance of early identification and intervention has been expressed with the result of studies. One of the studies states that effectiveness of intervention increases when it begins early and continues intensively (Pfeiffer, 2003). Gifted children are considered as an exceptional group who can benefit from early identification and intervention (Jackson, 2003). Special education provides extraordinary children with their specific needs, assists those children to upraise their outstanding abilities to increase their competencies and integrates them to the society (Ataman, 2003).

It is stated as a common view on gifted children that they are the fortune and the richness of Turkish Nation (Gurgun, 1980). Gifted and talented children are mostly ahead in different fields like sports, arts and science. They are seen as a substantial potential for their countries if their different needs are met through education. However, significant numbers of gifted children are lost in the education system (Donmez, 2004). Although gifted children are labeled as a precious natural resource, they are also the most ignored segment of the population of exceptional children (Sankar–DeLeeuw, 2002). Researchers eagerly assert that early identification and appropriate educational intervention raise the extraordinary success and decrease the risk of emotional and educational maladjustments of children who have different needs (Hodge & Kemp, 2000).

Early identification and providing appropriate educational intervention is possible as early as in preschool setting. According to Myers (1996), preschool and

day care center attendance has been rising because parents acknowledge that early childhood education is important for cognitive, physical and social-emotional development of children. Ruf (2005) stated that giftedness would be identified in a preschool where the children's superiority on developmental areas comes to the surface with demanding tasks. Preschool is an important educational environment where primary stimulations come and gifted children's attitudes towards learning and education is formed (Roeper, 1977). To sum up, preschools are the place where gifted children can be identified and intervened for their special needs.

Although there is an emerging interest in young gifted children, they still constitute the most unidentified and underserved group among the population of children with special needs (Sankar–DeLeeuw, 2002). There are debates to find out why the needs of gifted children cannot be met adequately in preschool. Even though many reasons can be listed, a broader view might yield greater insight. Pfeiffer and Petscher (2008) forward opinions that early education programs are not designed for precocious intellectual and academic abilities and/or special talents. Secondly, the myth that gifted children do not need special services due to the nature of giftedness since they can master skills under any circumstance discourages teachers and policy makers from focusing on the special needs of gifted children (Bain, Bliss & Choate, 2007). Last but not least, inadequate training of preschool teachers on identifying gifted children and providing them with effective programs for improving their talents and special abilities is expressed by Jackson (2003).

As the reasons connoted above illustrate, it is difficult to increase support to gifted preschoolers. According to National Association for Gifted Children (NAGC), creating an optimal environment for gifted children is important. Early childhood gifted education can help children to reach their fullest potential only if it is designed with the aim of recognizing, developing and nurturing the strengths and talents of each child (Shaha–Coltrane, 2006). In order to do that, preschool environment must offer challenging tasks, opportunities for conducting in-depth inquiries and developing products related to real world issues to gifted children in a comprehensive approach (VanTassel–Baska & Stambaugh 2005). According to research, the preschool environment serves as a platform for developing children's

intrinsic motivation for learning and also provides the opportunity for children to realize their talents and skills (Hwangbo & Yawkey, 1994). It would be the ideal place to discover potential for gifted performance and productivity.

Multitude of studies emphasizes the importance of early childhood teachers from different perspectives. Sankar-DeLeeuw (2002) stated the importance of teachers in preschool for young gifted children. It is claimed that teachers are in a place to fulfill the needs of gifted children. Those children must be identified as early as possible in their school career. Gifted children must be provided with appropriately challenging curriculum, instruction and assessment. When young gifted children are not identified and their needs are not met, gifted children will be failed and feel alienated about their own gifts/giftedness. Moreover, gifted children possess differences in their developmental stages. Those differences would be seen in a group with other children. Therefore, teachers are in an excellent position for determining these differences in the development of children due to the amount and nature of time spent with children.

Even if the importance of teachers' role in gifted education is signified, teachers mostly fail to identify and create the optimal environment for young gifted children (Johnson, 2003). The researchers argue that the ineffectiveness of teachers is caused by inadequate understanding of the characteristics of gifted children and strategies to differentiate the curriculum in a classroom with children from a wide ability range (Karnes & Johnson, 1991). The research results that knowledge is the necessary tool to meet the needs of young gifted children is striking. Morris (1987) reported that teachers who have knowledge of gifted characteristics and a commitment to assist the education of the gifted can affect not only the academic success but also social and emotional development of gifted children (p. 112).

However, another reason of ineffectiveness of gifted education in preschool, at least as important as lack of knowledge yet harder to notice, is the perception of early childhood teachers on young gifted children. Considering the importance of teachers' role in gifted education, examining teachers' perception of young gifted children would be a way to start identifying educational deficiencies in gifted education in order to improve support to gifted young children. Preconceived notions of teachers about the nature of giftedness, characteristics of gifted children and the

ways to meet their needs are listed in the research conducted by Hodge and Kemp (2006,).

Teachers' perception would affect the accuracy of identification of gifted children. Thrailill (1999) stated that there is a discrepancy between the ways teachers define and perceive giftedness and this discrepancy causes differences in identification and education of gifted children. Teachers' tendency to refer to children as gifted is determined by their perception of giftedness rather than by the definition of giftedness that they might have learned. Early childhood teachers' perception influence their decision-making processes when making pedagogical choices in their classrooms. Therefore, key considerations in this study are teachers' perceptions and needs regarding gifted young children.

Bandura's Social Cognitive Theory (1986) explains that there is a dynamic relation between cognitive, behavioral and environmental factors. This dynamic interaction becomes the spot of human behavior. Based on the framework of the theory, early childhood teachers' perception on giftedness shape their behaviors and decisions in the classroom as a way to meet different needs of gifted children in preschool. Therefore, the relationship between the perception, i.e., the teachers' perception of gifted young children, and the behavior, i.e., the use of differentiation of curriculum and instruction, of early childhood teacher must be examined.

According to Bandura's Social Cognitive Theory (1986), self-efficacy can be defined as a person's belief about his/her own ability to complete a task with a certain level of achievement. It is an individual's own conviction beforehand a given task regarding that individual's level of performance in completing that task (Senemoğlu, 2005). Individuals base their assessment of their own expected performance at a particular task on their own abilities, experience, knowledge and skills. A person's self-efficacy belief affects his/her approach to a situation, namely either as formulation of ways to tackle that situation or as hesitation and refraining from performing the particular task (Senemoğlu, Demirel, Yağcı, Üstündağ, 2009). Therefore the ability of teacher's to successfully meet the needs of gifted children is related to their estimation of their own ability to do so. Teacher's self-efficacy beliefs are an essential element of their behavior in the classroom and have a big impact on teacher practice. In order to increase teacher effectiveness, more information about

their self-efficacy beliefs and how these beliefs come into being must be acquired (Garvis & Pendergast, 2011).

Teachers' perception is influenced by culture (Mattai, Wagle & Williams, 2010), personal beliefs and experience (Miller, 2009). Teachers' perceptions of giftedness affect their expectations and evaluations regarding academic potentials and deficits of gifted children. Inaccuracy in the perception of gifted young children may result in unmet learning needs of gifted children.

Whitmore (1986) stated that young gifted children traditionally have been underrepresented in both gifted education and early childhood education. He reasoned that teachers working with gifted children are unprepared for the learning needs of gifted children. Pre-service or in-service training to understand gifted young children and their needs are seldom received. Therefore, early childhood teachers are rarely providing appropriate educational intervention for young gifted children. However, before even beginning to think about how to improve capabilities of early childhood teachers regarding gifted education, their needs have to be identified. While there are many different curriculum strategies to ensure that the abilities of young gifted children are nurtured and enhanced, the application of these is guided by the teacher (Cukierkorn, et al., (2007). Meeting the needs of young gifted children begins with recognizing their abilities and being sensitive to their needs. Therefore it is crucial to be aware of the perceptions of early childhood teachers on gifted young children.

1.2. Statement of the Problem

If the necessary experiences required for the optimal development of gifted children are not provided throughout their education, their learning would be hindered and they would likely fail to realize their potential. That is mostly under the authority of preschool teachers since they are just like a gate for children to enter a dreamland or a nightmare-land.

When we consider gifted children, it is assumed that gifted children possess different exceptional abilities in one or more areas of human endeavor (Sankar-DeLeeuw, 1999). To feed those exceptional abilities, the first step is to identify

gifted children and, the second step is to determine the needs of gifted children and the most demanding step is to meet these needs. Otherwise their talents or gifts will be misdirected and wasted. On the other hand, unidentified gifted children and gifted children who could not realize their full potential due to unmet needs mean lost potential which would also entail adverse outcomes for the society (Whitmore, 1986).

The outlook of education has been altered and teachers are expected to be meeting the variety of needs of heterogeneous groups in a classroom. However, trying to address this diversity in classrooms by targeting the commonalities of children prevents specific needs of each child, especially gifted ones, from being met properly (Stambaugh & VanTassel-Baska, 2000). Still, this situation cannot be regarded as an excuse for failure in identifying gifted children, defining and meeting their unique needs. Therefore, early childhood teachers should be the scope of research to reach gifted young children due to their key role in their education. In order for them to fulfill this key role, their own perception of young gifted children and how they express this perception should be analyzed in the first place to determine the shortcomings of young gifted education. Considering the significance of teachers' perceptions that influence identifying and meeting the needs of gifted students in the classroom, it is essential to examine current early childhood teachers' perceptions regarding young gifted children.

The aim of the study is to explore the perceptions of early childhood teachers on young gifted children. By exploring the perceptions of early childhood teachers on gifted young children, insight about their ideas on giftedness, gifted characteristics and educational needs of gifted children will be gained. Based on teachers' ideas on young gifted children, misconceptions will appear. Based on teachers' own perceptions, their needs to identify gifted children and to appropriately meet the special needs of gifted children will be brought out to the surface. Examining early childhood teachers' perceptions on young gifted children will reveal their self efficacy beliefs and needs in educating young gifted children in their classrooms.

The questions this research aims to answer can be grouped under two subjects, which are early childhood teachers' perception regarding young gifted

children and their needs to enhance gifted children's development in preschool. The first subject is investigated by gaining insight across three dimensions; teacher's perception on giftedness, teachers' perception on gifted characteristics and teachers' perception on education of gifted children. The second subject aims to examine teachers' self reported needs to meet the different requirements of young gifted children.

Therefore, the research will focus on the following questions:

- How do early childhood teachers perceive young gifted children?
    - How do early childhood teachers perceive giftedness?
    - How do early childhood teachers perceive characteristics of young gifted children?
    - How do early childhood teachers perceive gifted education in preschool?
- What are the self reported needs of early childhood teachers to meet the needs of young gifted children?
    - What are the self efficacy beliefs of early childhood teachers on meeting the needs of young gifted children?

1.3. Significance of the Study

A child with superior abilities runs at the risk of becoming bored and disenchanted with formal education. The greatest need is continuous research to find about the environmental conditions necessary for early maximum intellectual achievement and the development of identification procedures to select young gifted children and help pinpoint their special needs in terms of all developmental areas (Whitmore, 1980). This is mostly under the authority of childhood teachers in preschool.

When teacher education programs are taken into account, they offer mere introductory information in the area of needs of and educational practices for gifted children. However, the education on the concept of giftedness which does not address the underlying perceptions of teachers does not lead to any change in classroom practices. The ideas of practicing teachers concerning the educational

needs of gifted children are largely guided by beliefs which are based in theories. By increasing teachers' knowledge about the practice and their own beliefs, teachers may find that their beliefs have changed considerably, and in turn, have their practices changed as well (Guerra & Nelson, 2009).

Preconceived notions about the characteristics and pedagogical needs of gifted children are indeed addressed in the educational and psychological literature (Delisle, 1994; Fiedler, Lange & Winebrenner, 2002; Grant, 2002; Winner, 1996). However, little is known about perceptions of practicing early childhood teachers regarding the educational practices for gifted children, especially in Turkey.

The study is developed with the aim of contributing to the body of knowledge regarding the perception of early childhood teachers on young gifted children by documenting their perception on giftedness, gifted characteristics and education of gifted children. The study also aims to examine early childhood teachers' self-reported needs and self efficacy beliefs in addressing different requirements of young gifted children in preschool.

It is expected to gain insight into the perception and needs of early childhood teachers regarding gifted young children in order to contribute to possible future studies aiming at developing adequate teacher training strategies for gifted education. It would be important to provide in-service trainings to teachers with the aim of understanding who gifted children are, what gifted children need and how these needs are accurately addressed. If such training is provided, it is possible for early childhood teachers to recognize giftedness in young children, serve and act responsively to the needs of gifted children and facilitate the development of these children's exceptional abilities.

1.4. Limitation of the Study

The present study has some limitations which are mentioned below;

One of the limitations is the use of the terms "the gifted/talented child." The participants of the study are certificated early childhood teachers so that they mostly understand the terms; conversely, it is also possible that some of the participants may not adequately understand used terms.

The number of participants is small and they are not randomly selected. The sample does not truly represent early childhood teachers in Turkey, so the results may not be generalized, as one of the characteristics of qualitative research.

The interview method is used to grasp what is in the minds of the participants. It provided a detailed narrative rather than numerical descriptions. Yet, the sincerity of responses cannot be determined.

1.5. Definition of the Terms

Early Childhood Teacher: The person who provides preschool children with necessary education for healthy physical, cognitive, emotional and social development. (Ministry of National Education, Regulations on Early Childhood, 2004). In this study, early childhood teachers who have been working with 5-6 year old children were preferred.

Perception: The structure of the personal belief system of the individual. It is shaped for the response to stimuli and it defines the behavioral repertoire available for response. (Dash, 2007).

Giftedness: The children/students whose superior performance in intellect, creativity, art, leadership capacity or special academic fields in comparison to his/her peers is accredited by experts. (Ministry of National Education, Regulations on Science and Art Centers, 2009).

Young children: those children between the ages of 3 and 6.

CHAPTER II

LITERATURE REVIEW

2.1. Giftedness

Giftedness is a term used to describe children with special abilities. For giftedness numerous conceptions and countless definitions put forward. These definitions are on the continuum according to the degree of restrictiveness used in determining who is eligible for special programmes. One definition is focused on numbers in performance areas that are limited with academic achievement and excluded other areas such as music, art, drama, leadership, public speaking, social service, and creativity. Another definition may specify the degree or level of excellence one must attain (Renzulli, 1978). This shift between terms of gift and talent to define giftedness is denoted.

Gagne (1985, 1995) defined the differences between giftedness and talent. Relevant to the definition, giftedness is above average in one or more domain regarding competency. Giftedness is seen as untrained natural ability in one or more domain. Talent refers to performance which is above average in one or more fields of human intelligence. Talent is systematically developed abilities and knowledge in a field of human activity. Gagne set a frame to distinguish giftedness and talent. Talent is seen with performance while giftedness is considered as potential, ability and competence. And for young children, the more appropriate to grant gifts rather than talents.

2.1.1. Nature versus Nurture

Definition of giftedness varies considerably on psychological characteristics. Cognitive and meta-cognitive researches still define giftedness as having high IQ scores. Giftedness was seen as an endowment of genes. This idea is coming from

Charles Darwin's publication Origin of Species (Bulmer & Solomos, 1999). Another research on nature and nurture debate is Francis Golton's twin studies. The findings of the research indicate the powerful effect of genes on intelligence (Kaufman & Sternberg, 2008). Another study based on the comparison of identical and fraternal twin that are reared apart from each other show us the major contributor on intellectual development is genes, rather than environment. Shared environment has intensive effect on IQ of children in early ages, and lose its impact with time (Starnberg & Grigorenko, 1997).

The continuous debate on the effect of nurture on giftedness revealed outstanding findings. Nurture has crucial role in the development of giftedness to become a part of life experience. Al-Shabatat et al. (2009) stated that gifted development is supported by environmental factors including in good teachers, supportive parents, potential support, socialization, stimulation of interest, even playful activities with guidance. Environment provides opportunities to gifted children to show off their potential and supports nurturing their natural, inborn, inherited abilities. Correspondingly, giftedness requires social context that allows individuals' abilities to be flourished.

Which is more determining, nature versus nurture? Having a conclusion that these two forces are complementary enough to explain IQ scores and life time achievements. The necessities of their complementary features are expected but in practical sense which one is stronger, is not important. The valued realization is that neither can function without the other. The strength of both has to be noticed. Giftedness should be considered as maximal effect on life time concrete achievement with complementary and necessary forces around.

2.1.2. Definition of Giftedness

Numerous definitions and conceptions of giftedness have been put forward for years. The definitions regarding giftedness have been reformed from conservative to more liberal ones. The definition of giftedness has restructuring influence on educational practices. Therefore it is important to touch upon definition of giftedness.

When different definitions are reviewed, first attempt to explain giftedness came from psychologists. Those continue to equate giftedness with a high IQ in a conservative trend. However, the flexible or liberal definitions expand the conception and interpretation of giftedness in terms of test and non-test performance because they consider a broader range of performance areas than those measured by cognitive ability tests like giftedness in sport, art, music (Renzulli,1979).

Terman's (1926) definition of giftedness appears with gifted children who are the top %1 level in general intellectual ability, as measured by the Stanford-Binet Intelligence Scale or a comparable instrument. Due to the nature of the intelligence scale, this definition has accepted only children who have excellent verbal and performance scores. Children who have creative, artistic, psychomotor skills or leadership potential are overlooked. Those children who have superior performance in those areas are not presented in intelligence tests (Roedell, 1984).

Multifaceted approaches such as those of Sternberg (1997), Gardner (1983), and Renzulli (1978) are more consistent with present day theory and research. Sternberg first introduced his enriched triad theory of intelligence in 1984 with the categories of analytical, creative, and practical intelligence. Gardner's (1983) theory of multiple intelligences and Renzulli's (1978) three-ring conception of gifted behavior serve as precise examples of multifaceted and well-researched conceptualizations of intelligence and giftedness.

The U.S. federal government also subscribed to a multifaceted approach to giftedness

As early as in 1972 with *Marland Report*,it is expressed as defined in the study of historical perspective on Sidney P. Marland, Jr. (1914–1992)

> "Gifted and talented children are those identified by professionally qualified persons who by virtue of outstanding abilities are capable of high performance. These are children who require differentiated educational programs and/or services beyond those normally provided by the regular school program in order to realize their contribution to self and society. Children capable of high performance include those with demonstrated achievement and/ or potential ability in any of the following areas, singly or in combination: general intellectual ability; specific academic aptitude; creative or productive thinking; leadership

> ability; visual and performing arts; psychomotor ability" (Jolly, 2009, p. 43).

Although there are various definitions of giftedness in Turkey, generally accepted definition is different from which is stated above. In respect to Ataman (2003) widely accepted one is

> "Those children who display superior performance in comparison to their peers in more than one of their cognitive abilities or intellects; possess strong creativity and show high commitment to completing tasks and overcoming challenges." (p.178)

Also it is revealed that gifted children display a performance which is higher than the 98 % of same age group.

2.1.3. Theoretical Framework: Giftedness

According to Joseph Renzulli (1978), giftedness is an interaction among three components: (a) above average abilities, (b) task commitment and (c) creativity. Renzulli reported that any individual who is able to process or develop this composite of traits and apply them to any valuable area of human performance is considered to exhibit gifted behaviours.

Abraham Tannenbaum (1983) pointed out that giftedness is composed of five factors: (a) a sliding scale of general intelligence, (b) special ability, (c) non-intellectual factors, (d) environmental factors and (e) chance factors. He referred to gifted individuals as those with the "potential for becoming critically acclaimed performers or exemplary producers of ideas in spheres of activity that enhance the moral, physical, emotional, social, intellectual or aesthetic life of humanity" (p. 27).

Howard Gardner (1995) believed that giftedness could occur in more than one area. He introduced the concept of multiple intelligences and included eight possible domains of intelligence: (a) verbal-linguistic, (b) logical-mathematical, (c) visual-spatial, (d) bodily-kinesthetic, (e) musical, (f) interpersonal, (g) intrapersonal and (h) naturalist intelligences. More recently Gardner (1999) examined the ninth intelligence which is called as spiritual intelligence (p.33-44).

Robert Sternberg (1986) proposed the existence of three different kinds of giftedness: (a) analytic, (b) synthetic, and (c) practical giftedness. Analytic giftedness is the kind of academic talent measured by typical intelligence tests. Synthetic giftedness entails creativity, insightfulness, intuition, and the ability to cope with novelty. Practical giftedness involves the ability to apply analytic and synthetic intelligences in real life situations.

James Borland (1989) defined gifted as students as those in a given school who are exceptional by virtue of markedly greater than average potential or ability in some area of human activity generally considered to be the province of the educational system. It is added that whose exceptionality engenders special-educational needs that are not being met adequately by the regular core curriculum (p. 33).

Francoys Gagne (1990) identified five general fields of talent in which gifted children have the aptitude to achieve: (a) academic, (b) technical, (c) artistic, (d) interpersonal and (e) athletic.

Barbara Clark (1997) defined giftedness as: a biologically rooted concept that serves as a label for a high level of intelligence and indicates an advanced and accelerated development of functions within the brain. Such development may express itself in high levels of cognitive, affective, physical sensing, and/or intuitive abilities, such as academic aptitude, insight and innovation, creative behaviour, leadership, personal and/or interpersonal skill, or visual and performing arts. (p. 26)

Dabrowski's "over-excitabilities" or "super-sensitivities" theory is another definition regarding giftedness and gifted behaviours. As rewording theory; five intensities: Psychomotor, Sensual, Emotional, Intellectual, and Imaginational are included to explain giftedness. Gifted children tend to have more than one of these intensities, although one is usually dominant. Psychomotor one is exemplified with rapid speech, impulsive behaviour, and competitiveness. Heightened sensual awareness of all five senses: Sensitive to smells, tastes, or textures of foods. Emotional one is strong memory for feelings, extreme emotions, and imaginational vivid imaginations. Intellectual intensity is the one most recognized in gifted children. It is characterized by activities of the mind and thought. Children who lead

with this intensity seem to be thinking all the time and want answers to deep thoughts (Jackson & Moyle, 2009).

Although a variety of definitions for giftedness have been presented, they all have one element in common: demonstration of extremely high performances in one or more areas of human endeavor. Some areas of giftedness are very specific talents, such as sports, music, some areas of giftedness are related with special aptitude in mathematics, science, language, while other areas of giftedness are quite general, such as leadership skills or the ability to think creatively. Therefore, to define giftedness in harmony with behaviors and general characteristics of gifted children would be more beneficial than using clear cut definitions.

In the present study, the definition of giftedness in the latest studies of Dönmez (2009) will be used. According to this definition, giftedness is a state being able to deliver advanced performance as observed by experts through means of assessment tools in comparison to age peers in one, more or all of the domains that are genetically rooted and develop through environmental stimulation, namely physical growth and development, psychomotor development, perception, cognitive development, linguistic development, social and emotional development.

2.2. Characteristics of Gifted Children

According the Panov (2002), giftedness has to be considered by taking multidimensional approaches. Giftedness represents a very complex mental formation in cognitive, emotional, motivational, psycho-physiological and other spheres of the mind which are inseparably interwoven. Manifestations of giftedness traits of children depend on great individuality rather than providing a streamline according to age or other factors. The criteria that are used to identify giftedness differ in terms of developmental abilities intellectual such as academic, creative, artistic, psychomotor (athletic) and leadership. The intensity of the manifestation of defined characteristics of giftedness may also chance. The manifestation of the characteristics of giftedness is developmentally determined as age stable or transient.

In addition to this it is useful to differentiate the following two groups: one of the groups includes children with harmonious development of cognitive, emotional,

regulatory and psychomotor abilities. The other group includes children whose mental development is distinguished, but lack uniformity in the level of cognitive and emotional processes in question. For example, a child who has a highly developed intellect may be distinguished by emotional instability, by underdevelopment of the psychomotor sphere.

Neihart (1996) suggests that milestones of language, cognitive and social areas for giftedness are difficult to assess but their advanced knowledge, thinking and reasoning are illustration of giftedness and easy to recognize. Beside those; creativity, humour, spontaneity are leading. Gifted children are striking for their demands of independence and their competitiveness. Those children manifest persistence in completing tasks and advanced social maturity. Role playing activities of gifted children in the classroom is impressive to see how they are strict followers of the rules and reminders. Sharing and justice are characteristics which bring unexpected maturity; this maturity is easy to notice with gifted children especially in young ages.

It is informed that there are no unique skills of gifted children and instead of comparative age group expectations; the abilities are not regarded with degree of advancement. That is to say, gifted children have similarities with their age mates but with older children who are the same mental age (Porter, 1999).

Harrison (2004) examined family reports conducted observations with gifted children and come up with valuable findings about the characteristics of gifted children. Gifted children display some characteristics that are different than their age mates. The curiosities which result from instinctive motivation and independent investigation in data collection are one of their differentiated abilities. Raised abstract and complex questions are not compatible for their chronological age group. Gifted children have excellent memory skill. They perfectly recall what they saw. Memorization of rhymes is easy and the success of recalling them is exceptional, due to their advanced ability in auditory memory. Creativity is another feature of gifted children. Creativity in their language use and expression of ideas is remarkable. The researcher also stated that gifted children are able to formulate theories or do in depth research explorations especially in the concepts of their interest. Most of the gifted

children learn to read before their age mates and have greater number recognition. Their greater level of sophistication and abstraction leads to advanced or detailed visual representation.

All those abilities may be remarkable but on their own they require categorization to make young gifted children's characteristics more understandable in a comprehensive manner. Understanding young gifted children is started with understanding their characteristics. One way of understanding young gifted children is having broadened knowledge on the general characteristics of gifted children. An overall picture of gifted children is necessary. Categorization of young gifted children's characteristics has been done by Grace, (2010): general intellectual ability, specific academic ability, creative thinking ability, leadership ability, affective/social–emotional ability and psychomotor ability. Gifted children are expected to perform higher than their non-gifted peers in one or more ability groups.

Characteristics of young gifted children are not announced frequently in the gifted education researches. However, traits and behaviours of young gifted children represent basic gifted performance in preschool setting. The most obvious indicators of giftedness appear as long attention span, excellent memory and advanced language skills (Tannenbaum, 1992). Early language development issue has been studied by Clark (2002). The findings revealed that young gifted children use enlarged vocabularies and complex sentence structures at the age of 2 - 3. This is an instrument for young gifted children to communicate with family members by expressing their ideas and seeking information. In respect on cognitive abilities, young gifted children have varied interests and display curiosity towards things around them (Renzulli et al, 2002). As parents of gifted children frequently express both verbal and cognitive abilities lead to early reading abilities (Robinson, 1995).

Play style and leadership in young gifted children is another indicator of giftedness. Through play, children's social, cognitive and verbal skills can emerge (Bredekamp & Copple, 1997). According to Wright (1992), gifted children prefer cooperative play groups with socially advanced play styles. The nature of young gifted children's play is mostly structured by rich and complex themes. Due to

advanced verbal skill of gifted children, they tend to express their feelings, ask easily and give directions to their friends and dominate the play group by providing solutions to encountered problems (Kitano, 1982).

Some empirical evidence about characteristics of gifted children which can lead to misunderstandings concerning the characteristics of gifted children need to be discussed. Asynchronous development means uneven development which is observed with the gifted young children. Development of intellectual abilities, fine and gross motor skills, social abilities is expected to be in harmony with each other. However, this expectation is invalid (Silverman, 1993). Gifted children set high and unrealistic aims to themselves to reach by the power of their intelligence. However, their motors skills may not permit it to be achieved at the aimed level. This leads to frustration (Baum & Olenchak, 2002).

Social emotional functioning of gifted children is under debate of two approaches. Result of a study maintains that gifted children are more vulnerable than non-gifted peers to suffer from advanced social emotional development (Dauber & Benbow, 1990). Freeman (2001) stated that gifted children see themselves as different and cannot fit in the group. On the other hand, Colangelo (2002) draws conclusions by synthesis researches and found out that gifted children adjust well their age-mates and their advanced cognitive development meets the social needs of young gifted children. Both views hold certain validity and seem to depend on individual characteristics of children.

Perfectionism is another characteristic of young gifted children. Relative researches to perfectionism come up with controversial findings in the literature. Yet they agree on the significance of understanding of perfectionism as a characteristic of young gifted children. Many young gifted children must cope with perfectionist tendencies. Gifted children intensively desire to have the best results they can imagine, when the results are not satisfactory from their point of view, they are frustrated (Adderholdt & Goldberg, 1999).

Another typical behaviour triggered by perfectionism is avoiding risk-taking. Gifted children refuse the opportunities to realize their own potentials, due to the fear

of failure (Baum & Olenchak, 2002). Avoiding risk taking may result in underachievement in the school which confuses teachers when decide whether they are gifted or not. Therefore, this characteristic is underlined.

Giftedness has been seen with precocity, i.e., a rapid rate of development of one or more realms. According to Clark (2002) precocity may lead gifted children to frustration and boredom in the class while waiting for their peers to learn skills that gifted children already have.

These characteristics of gifted young children have to be acquired by early childhood teachers to recognize gifted children and to meet their needs regarding their different characteristics. As it is important for early childhood teachers to understand that gifted children have certain advantages but they also suffer from some disadvantages, which come from nature of their development. The recognition of disadvantages is significant to see gifted children in a holistic way.

Young gifted characteristics are observable with their behaviors. Behavioral features of young gifted children in preschool setting have its place in the literature (Bilmen, 2011, pp. 132-140)

- "Cognitive

Attentive and alert

Has advanced verbal skills ahead of his/her peers

Develops an early interest in reading and books

Learns fast

Inquisitive

Enjoys being in the company of children of higher age

Pursues his/her interests, collects things

Displays an observable talent in problem solving and planning

Has an advanced sense of humor ahead of his/her peers

Prefers new and challenging experiences

Can hold acquired knowledge in his/her memory for a long time

- Creativity

Asks many questions

Desires to do certain things in accordance with his/her own thinking

Prefers to work/study alone

Desires to apply a newly acquired experience on his/her own

Has a broader imagination than his/her peers

Thinks of numerous ways to reach an objective

Produces answers that are unexpected and sophisticated for his/her age

Has original thoughts

- Leadership

Communicates easily with adults and other children

Adopts easily to new situations

May pressure others while working to reach an objective

His/her thoughts are valued by others

Observed to be the first to be chosen by his/her peers

- Music

Produces original tunes

Can display the level of his/her tonal memory

Enjoys musical activities

Sensitive to music

Easily repeats a sample rhythm

Easily distinguishes rhythm samples, melodies and tones.

- Drawing/Painting

Dedicates extra time to activities such as drawing and painting

Draws imaginary objects other than live beings

Recalls objects in detail

Is satisfied by the things he/she makes

Values artistic activities related to drawing/painting and plastic arts

Has prolonged attention span in artistic activities

Is a planner in terms of organizing artistic activities"

2.3. Gifted Education

In the area of gifted education, addressing the needs of gifted young children must be grounded by understanding characteristics of young gifted children and by considering the strengths and abilities of young gifted children. In order to serve gifted young children, considering the potential of gifted children and understanding asynchronous development pattern is cardinal (Edward, 2005).

As Rotigel (2003) stated the role of early childhood teachers that being aware of the fact that young gifted children experience their world around differently than their age mates. Therefore, they are in need of modified curriculum and differentiated instruction.

On the other hand, the basic principle of providing the appropriate education environment for young gifted children is that the teachers should grasp the need for special programming for young gifted children. Sak (2011) determined that there are some myths and dogmas in Turkey regarding education of gifted children. One of them is about the educational needs of gifted children. Gifted children are thought as if they do not need special services, since they have higher abilities than their peers and can be successful under any circumstance. The inaccuracy of this myth is proved with empirical evidence. Some of the evidences are connected to the success of provided special service for gifted children (Fiedler et al., 2002). Some of the evidences are indicating the adverse effects of absence of special programming (Gross, 2002).

McCoach (2005) noted that gifted children with unrecognized exceptional abilities may suffer from social emotional difficulties in the school. Therefore, the special needs of gifted children must be met in the school to make them to reach their potentials.

2.3.1. Identification of Gifted Children

Recent researches on brain development underline the importance of early life experiences in brain development (Marshall et al., 2004). As early childhood education is gaining importance in the field of education, identifying gifted children in preschool becomes more important in the field of gifted education (Sankar-DeLeeuw, 2002). Early identification of gifted children is critical to provide challenging opportunities to nurture their gifts. If their gifts are intended to develop rather than a skill based curriculum which intends to mitigate weaknesses better results will be achieved (Borland & Wright, 2004).

By the light of the significance of early identification, the critical issue of identification of gifted and talented children in preschool emerged. Many researchers suggest that identification process should be designed by combining more than one approach (Burns, 1990; Worthman, 2005). It is claimed that beneficial information can be reached through parent interviews, checklists and anecdotal records (Louis & Lewis, 1992). Teachers' observation and working samples are pointed as useful ways to identify young gifted children (Cohen, 1989). Additionally, test scores and performance ratings are discussed as important tools.

Identification process of gifted children is structured based on the dominant view that defending that giftedness is observable in terms of schoolhouse or academic giftedness (Renzulli & Reis, 1997). It is characterized with high grades and high score on Intelligence Quotient (IQ) Scores.

The Examples of specific tests include the Cognitive Abilities Test (CoGAT), Gifted and Talented Evaluation Scales (GATES), the Iowa Tests of Basic Skills (ITBS), Scales for Rating the Behavioural Characteristics of Superior Students, the Kaufman Assessment Battery for Children (K-ABC), and the Stanford-Binet Intelligence Scales (Johnsen, 1997). Another example of IQ test measures is WISC-R (Wechsler Intelligence Scale for Children) (Gilman, 2003). Most of these tests are considered IQ tests and none of them can fully determine a students' learning potential. Rather, they focus on the scores which result only from questions (Johnsen, 1997). Prominently, Webb (2006) stated that by using the standard tests most of

characteristics of gifted children like creativity, sense of humour, curiosity, empathy are out of evaluation, in addition to the general limitations of standardized tests.

Using standard tests in preschool to identify gifted children is not effective. The first reason is the single dimensional approach of standard tests in response to giftedness and the elimination of most of the characteristics of young gifted children as valuable as test scores. The second reason in the literature is that IQ scores in preschool are not reliable due to the nature of the test offered before the age of six (Wilson, 1983). In preschool setting as Bilmen (2011) stated, multiple dimensional identification process will be more accurate and reliable.

In the literature, using creativity tests is attached to identification process of young gifted children. Kim (2006) suggested that creativity tests can be used in the identification process of gifted children. The creativity test offered is Torrance Test of Creative Thinking (TTCT). The test is not offered as a sole measure for identifying gifted children but is suggested as complementary for standardized tests.

Relevant to that point, suggested multiple criteria assessment procedure is described. This procedure is constructed by analyzing four different sources for ascertaining the ability of young gifted children; intelligence, achievement, creativity and motivation. Intelligence is referred with standardized tests, achievement is determined through performance test results, creativity is measured by creativity tests and motivation is defined through information which comes from teachers with emphasis on teacher nomination.

In respect to all the debates and suggested strategies to identify gifted children, the combination of formal and informal assessment types is considered as the most effective way to have comprehensive view on identification of gifted children and to plan developmentally appropriate practices for different needs of gifted children (McWilliam, 2005).

2.3.2. Gifted Education Models

In the literature there have been two different ideas considering gifted education; heterogeneous grouping and homogeneous grouping of gifted children in

the schools are under debate in the literature. According to these two groupings different education practices are offered in the literature.

In heterogeneous groups learning is called cooperative learning. Cooperative learning is beneficial for all students to teach working with others of different abilities although the benefits of cooperative learning are not clear for gifted children (Rogers, 2002). Cooperative learning for gifted children may mean no working or disproportionate consideration of abilities. For gifted children working with others who are gifted is beneficial in terms cognitive and emotional development (Fiedler et al., 2002). The gifted learners learn differently and at a quicker pace than do their age peers. They also have different interests, more mature senses of humor and sometimes special emotional and social development needs. These needs are better met when a child feels supported and accepted. This is most likely to occur in a homogenous group setting (Bruner, 1996).

Illustrated two types of ideas on gifted education result from different implications. *Acceleration* is illustrated as a practice in which gifted children are served to move through traditional educational mainstream more rapidly, based on readiness and motivation. Acceleration which is not supported by the educators because such concerns that acceleration may cause social emotional difficulties (McCoach & Siegel, 2001). On the other hand, Lubinski and colleagues (2001) suggested that acceleration benefits gifted children who can demonstrate academic and emotional maturity. Neihart (2007) found that gifted students in special schools, special classes and pullout programs show higher achievement than their peers who are in regular classrooms.

Ability Grouping refers grouping children in accordance with their abilities. Similar ability groups receive similar instruction. Gifted students can benefit from ability grouping since grouping provides opportunity to access more knowledge and skill based acquisition in the strength area of gifted children (Jarosewich, 2001).

There are plenty of education models for gifted children. However, in the literature mostly stated way to meet the different needs of gifted children is portrayed with differentiated curriculum. This is also regarded as the most suitable educational implication in preschool.

Differentiated curriculum; i.e., differentiation used to expand the core curriculum benefit students for further understanding or discovery and satisfy the needs of able and gifted students for a more challenging curriculum (Samuels, 2005). The differentiated curriculum must be constructed by considering implications. The first one is acceleration which is a form of an advanced curriculum or a faster pace of learning. The second one is depth which is illustrated with uncovering more details and new knowledge related to the topic, determining the facts, concepts, generalizations, principles, and theories related to them. Complexity is the third one which involves making relationships between ideas, called as the content of the topic. The last one is novelty which focuses on the student's unique approach to learning, individual studies is another way to express it (Kaplan, 1994).

All those education models are presented with their advantages and disadvantages, mostly the classroom implications are perceived by the teachers' preferences based on their perception regarding which suits more the characteristics of young gifted child in their classroom.

2.3.3. Gifted Education in Turkey

The gifted education in Turkey cannot be considered a recent issue, when education in Ottoman Empire is examined. When the education system in the Ottoman Empire is examined, Enderun Schools emerge as exemplified schools for gifted children. Miller (1941) stated the functionality of Enderun as a system which detects and educates children whit extraordinary talent and ability as prospective leaders (cited in Akarsu, 1998).

Enderun means inner part of palace. Enderun Schools were supported by the Sultans. Enderun Schools were established by Murat II in mid-15th century. Then Fatih Sultan Mehmet developed those schools to provide appropriate education for devshirmes who were later recruited to higher positions in public services. Enderun Schools had served for four hundred years successfully. An important feature of those schools was giving primacy to individual characteristic of chosen population.

The graduates were placed in the army and government management seats. Beside those, famous musicians, artists and poets were educated in Enderun Schools (Davaslıgil, 2004).

The students for Enderun schools were selected by a commission which was searching talented and gifted children around the country. Selection was made regarding the physical and personal characteristics of children. Criteria for selection were developed by the commission. After the selection, children were educated for 6-8 years as a preparation for later education. Only 30 % of selected and educated children stayed for advanced stages of Enderun education. Children who were educated in Enderun schools were recruited to public services. Those graduates were well-paid and respected in the society. However, Enderun Schools lost their power as the empire declined (Akarsu, 1998).

After the disintegration of the Ottoman Empire, Republic of Turkey was founded in 1923. The education law of the new Republic had no apparent reference to gifted children. However, it is worth mentioning the "İdil Biret - Suna Kan Law" issued in 1948. In 1957, the scope of the law was extended and "The Law Numbered 6660 regarding Children with Exceptional Talent in Music and Plastic Arts" was introduced. This law is still in effect. However, no one was included to benefit from this regulation after 1978. From 1948 to 1978, as many as 20 artists who have achieved worldwide fame were trained under the patronage of the state (Ataman, 2002). However, the regulations and administrative practices in Turkey couldn't keep up with the change of perceptions on giftedness and education of gifted children worldwide.

The world's attention to gifted children is triggered with a remarkable event in history. In 1957 the space race started with the sending of Sputnik. This remarkable achievement was the fruit of the work of gifted and talented people who were well educated. The world recognized the importance of human resource that can be used with appropriate educational applications. Turkey was one of those countries. In Turkey, the first attempt at gifted education was the opening of Ankara Science High School (Ankara Fen Lisesi) in 1964. Ankara Science High School (Ankara Fen Lisesi) was founded with the aim of educating children as scientists

who would have superior abilities in mathematics and science. Until 1973 special gifted classes, ability groups and same ability level classes were practice (Ataman, 2002).

When we examine the current status of gifted education in Turkey we can come across "Science and Art Centers" (Bilim ve Sanat Merkezleri) (BİLSEM). In 1993, a branch for the education of the gifted was founded under the General Directorate of Special Education and Counseling of the Ministry of National Education. Following that Yasemin Karakaya Science and Art Center began its activities in 1994 in Ankara. Currently there are 61 Science and Art Centers with the responsibility of education of gifted and talented children. Science and Art Centers are seen as a new type of Enderun School since the aim of the institution is to educate prospective leaders, scientists and artists in the society (Ministry of National Education Regulations, 2007).

Science and Art Centers have a sub department which is responsible for the education of young gifted children. According to the regulations of the Ministry of National Education, this department aims at bringing up gifted children/students as individuals that combine scientific thinking with aesthetic values, are productive, problem solving, independent, innovative entrepreneurial, open to change, thinking in alternative ways, qualified, patriotic and talented (Ministry of National Education Regulations, 2007).

In Turkey, gifted and talented students are educated at the Science and Art Centers which is a different education institution, independent of their school programs. The student selection procedure of Science and Art Centers consists of three stages which can be called as identification process of gifted children. These stages are called; nomination, group scanning and individual examination.

Nomination Process: In order to determine gifted and talented children, the observation forms prepared by the MoNE (Ministry of National Education) are sent to the pre-schools, primary and secondary institutions. These forms are filled in by preschool teachers in preschool period, by branch teachers for grades 1 to 5 and by branch teachers' board for grades 6 to 8 in primary education institutions and by class teachers' board in secondary education institutions. Teachers deliver forms to

the directorates of Science and Art Centers, which are then examined to determine, the candidate children (Journal of Papers, 2001). *Group Scanning:* The children, who are nominated for the Science and Art Centers, participate at a group test prepared by MoNE. The children who exhibit adequate scores on these group tests in terms of intellectual ability pass to the next and last stage in identification. *Individual Examination:* Children who exhibit high achievement in group scanning test get into individual examination. The examination is conducted by the experts of Counseling and Research Centers (Rehberlik Araştırma Merkezi) (RAM). At this stage, different types of intelligence tests are applied. The children who are suitable in terms of special ability are subjected to re-examination by the experts of Science and Art Centers.

At the end of the process for identification of gifted/talented children, the group scanning, IQ and ability scores of each child are ranked. WISC and Stanford-Binet intelligence tests are mostly used in determining the IQ levels of children. At the end of this ranking, considering the quotas of the Science and Art Centers, children are enrolled. Due to the quotas, some of the children examined may be unable to be registered to the Science and Art Centers even if they are gifted/talented.

At Science and Art Centers, selected children attend a five-stage education program, namely, Adaptation (Orientation) Stage, Supplementary Education Stage, Stage that Has Individual Characteristics Realized, Stage that Develops Special Abilities, and Project Production Stage (Journal of Papers, 2001).Within and at the end of this process, education programs are evaluated and evaluation reports are prepared by the guidance and leader teachers in Science and Art Centers. These stages all have different degrees of significance in the education of gifted and talented children.

Beyazıt Ford Otosan Elementary School is founded in 30 July 2002 by Ministry of National Education and Istanbul University. The school has been founded as a part the gifted education Project of Istanbul University. The half of the school's population consists of gifted children and the other half of children displaying normal development. Gifted children have been accepted the school who are referred by Guidance and Research Department and the approval of the project committee. Prof. Dr. Ümit Davaslıgil is leading this school to make it into an

established institution for gifted education. The school adopts an education model that allows gifted children and normally developed children to be educated together with the aim of helping gifted children to have a healthy social adaptation and develop their self-esteem. By doing this the exclusion of gifted children from society is prevented (Bildiren, 2011).

TEV İnanç Türkeş Özel Lisesi (TEVİTÖL) is designed to meet the different needs of gifted children who are at the age of high school education. TEVİTÖL was founded in 1993. The school has impressive facilities and limited number of students. This allows the school to provide private and differentiated programmes for each student in the school (Bildiren, 2011).

There are some programmes in Turkey which are run under the auspices of the universities. *Üstün Yetenek Eğitim Programi (ÜYEP)* is founded with the support of TÜBİTAK by the Directorate of Gifted Education at Anadolu University. The education has started in 2007-2008. *İnönü Çocuk Üniversitesi* has been founded as a sub department of İnönü University Research and Application Center for the Gifted. This program aims to provide education to children who are between the ages of 7 and 13 by providing enrichment and differentiated programmes. *İstanbul University Children University Education and Research Center and Ankara University Child University* are the foundations which are aimed at providing models in gifted education in Turkey. The list of other institutions related with the education of gifted and talented is given (See Appendix A).

The latest attempt to contribute to the education of gifted children is the Parliamentary Inquiry Committee that has stated to work at the Grand National Assembly of Turkey. This committee was founded with the aim collecting facts about gifted education in Turkey. These facts are stated in the objectives of the committee and sum up the latest status of gifted education in Turkey.

In the objective of the committee it is stated that there have been attempts and certain applications at gifted education throughout the history of Republic of Turkey. However, those attempts and applications have not become a part of education policies in present. Children who have higher cognitive abilities, creativity, high task commitment and problem solving skills should be defined as the richness of the

country. Providing education with appropriate for their abilities and talents makes gifted children important resources for the country. Otherwise, they will face adaptation problems in general education system and their value will be lost. Gifted children are elite and strategically valuable for the country. In terms of the relation between government and education, gifted education has a functional role. Gifted children are resources which have to be detected and educated for the well being of the country in the long run. According to a research conducted by TÜBİTAK, there are 682 thousand gifted individuals between the ages of 0-24 in Turkey. That reveals that 2 % of the population is gifted. Only 6942 individuals have been identified and educated by Science and Art Centers so far. Gifted children are strategically important for the welfare of the country. Therefore, the identification, education and effective recruitment is important before losing the influential human resource of the country (TBMM Parliamentary Research Commission, 2012).

2.4. Perception

2.4.1. Theoretical Framework of Perception

A conceptual framework is set with Bandura's (1986) Social Cognitive Theory that helps guide this study of teachers' perception based on some of the fundamental features of the theory suggested. According to the theory there is a dynamic interaction between behavioural, cognitive and environmental factors. Bandura's "triadic reciprocality" illustrates the idea that a person's actions result from not just one factor, such as environment or reward or thoughts and beliefs, alone. In contrast, action is determined by a dynamic interplay of these "determinants" (Bandura, 1986). The interplay or "reciprocality" between determinants is not always consistent. Sets of interacting factors are varied for different individuals, circumstances or activities. Sometimes the environment is dominating, e.g., teachers may strictly follow the curriculum pace and provide instruction since they fear to get negative performance evaluations from the management. At the same school other teachers may modifying the curriculum with a high self-efficacy belief rooted from in better professional education and deviate

from the predetermined curriculum to better meet the needs of the students. In this case cognition and personal factors are determinants.

Another aspect of social cognitive theory is termed “self-regulatory”. It is explained in a way that people do not always choose actions to please others. People self-select their actions and goals and persist in their efforts until their performance matches their goals (Bandura, 1986). To illustrate this point, a teacher must have the knowledge and skills to bridge potential into performance for diverse learners in classrooms. The meeting of diverse learning needs of students becomes a self selected goal. In order to accomplish this goal, the teacher seeks out professional development to attain his/her goals. Furthermore, as the teacher modifies the curriculum and instruction and student performance and achievement increases.

Bandura’s work deals with the importance of a person’s self-efficacy belief with regards to tackling a situation. A person’s belief that he/she is able to manipulate behavior to bring about intended outcomes can be defined as perceived self-efficacy. Self-efficacy beliefs affect three aspects of behavior by influencing choice of behavior, level of expected performance and determination to achieve intended results regarding a situation or a task (Bandura, 1994).

The information sources that shape self-efficacy beliefs can be categorized in four groups. Individual experiences regarding a concept that influence self-efficacy beliefs are defined as mastery experiences. Secondly, vicarious experiences that are acquired through socials models based on other people’s success in similar situations serve as a source of information. The third source is social persuasion in the form of verbal encouragement increasing personal beliefs regarding one’s own capacity to deal with a situation. The last source is related with individual psychological responses in terms of self expectations of success or failure (Goddard, Hoy, Woolfolk-Hoy, 2000).

The relative strength of one’s self-efficacy affects his or her actions. People with a high assurance of their capabilities tend to look at challenging tasks as opportunities to master their abilities and display a strong commitment in fulfilling the tasks set ahead of them. On the other hand, people with weak self-efficacy beliefs

lack the commitment to pursue their goals and are prone to quit early. In this context, teacher's self-efficacy beliefs are a fundamental factor in determining teaching behaviors in the classroom, which in turn affect student performance (Woolfolk & Hoy, 1990).

According to Pajares (1992), there is a causal relationship between the beliefs of teachers' regarding their self-efficacy and the implementation in classrooms. Teachers with a positive self-efficacy belief are able to facilitate a warm atmosphere in the classroom to provide support, safety and acceptance for students (Ashton, 1984). On the other hand, teachers with low self-efficacy beliefs center classroom strategies on themselves and are more dependent on text books (Tschannen,Hoy & Hoy, 1998).

The conceptual framework of perception points to the facts that class practices adopted by teachers are defined through their cognitions. The actions teachers decide to implement in the classroom are determined through the interplay on the environment, their cognition and behaviors. Teachers also choose their education goals in relation to their self-efficacy beliefs.

2.4.2. Teachers' Perception on Young Gifted Children

Many gifted children are unidentified in their schools or worse they are defined as difficult children due to behavior they exhibit. The behaviors may bring out their traits of uneven development, precocity or perfectionism. These children may also begin to think, they are different since they neither are nor operate like other age mates. When teachers meet a child who has low self-concept and is anxious, they may evaluate these features negatively instead of recognizing them as indicator of giftedness. Teachers often do not have specialized training in working with gifted children so even when they attempt to meet these children's needs they often fail. This would be the result of a lack of professional development or the result of beliefs about who gifted children are, what their characteristic are and how their characteristics are and how their education practices should be.

The role of the classroom teacher is crucial to the screening of gifted students because teachers provide the referrals and recommendations that lead to gifted student identification (Miller, 2009). Teachers' beliefs and practices have direct effect on curriculum implementation and structure of planning (Payner, 1994). The majority of the literature focuses on teacher perceptions that cause bias in referral and identification of gifted students. Teachers' perception of the characteristics of gifted children can cause bias regarding the strengths of gifted children that adversely affect instructional delivery (Hertzao, 2005; Payner, 1994; Miller, 2009; Fullan, 2003).A qualitative study about teachers' beliefs about the in need to know and address student differences, point to their lack of precision in defining and addressing these differences (Tomlinson, Tomchin, et al., 2004).

In the case of teachers trained in gifted education with overall characteristics and different needs, teachers may still have trouble to put into practice what they know. Teachers may resist putting into practice these programs or instructional planning, if they do not agree with them, or they do not see them as important. This means that program may be destined for failure before it is even implemented (Wang, Elicker, McMullen, & Mao, 2008).Therefore, putting emphasis on teachers' perception is very important to determine the classroom practices.

Teachers' perception shaped by a variety of different factors. One is teachers' personal beliefs and assumptions which are a byproduct of the mainstream culture in which giftedness is perceived (Swanson, 2006). Another factor which influences teachers' perceptions of giftedness is their expertise in the field (Miller, 2009). However, the education or training on the concept of giftedness which does not address the underlying beliefs and practices of teachers, does not lead to any change in classroom practices. By increasing the teachers' knowledge about the practice and their own knowledge about their beliefs, these teachers may find that their beliefs have changed considerably, and in turn, so have their practices (Guerra & Nelson, 2009).

Teachers' knowledge about young gifted children drives them to understand the importance of meeting needs of young gifted children in their classrooms. Understanding the characteristics of gifted students decreases the danger of not

meeting their learning needs, otherwise student defiance may have masked teachers' perceptions of gifted students' true abilities (Hodge & Kemp, 2006). However, in the absence of definitive criteria upon which to base identification of gifted students, teachers must rely on their training, stereotypes, or both. This often results in teachers relying on their own discretion, which in turn gives way to bias (Siegle & Powell, 2004) and may lead to teachers focusing on perceived deficits rather than strengths of gifted children (Neumeister et al., 2007).

The perception of teachers regarding early childhood giftedness influences their practices within their classrooms (Wang, Elicker, McMullen, & Mao, 2008). There are two studies showing the relation between beliefs and practices within classroom (Charlesworth, Hart, Burts, & Hernandez, 1991; Charlesworth et al., 1993).

Some major concerns exist in the implementation of gifted programming in the younger grades. One of those concerns is under-identification of gifted students. As the chronological age of children decrease, it becomes more difficult to identify gifted children. However, meeting the needs of gifted preschoolers are a stronger stone to build later achievement of gifted children upon (Sankar-DeLeeuw, 1999). If teachers do not believe that young gifted students can properly identified as gifted, they will not recommend those children for gifted programming (Elhoweris, 2008; Moon & Brighton, 2008). According to a study conducted by researcher Sankar-DeLeeuw (1999), only half of participant teachers agreed that children could be identified as gifted in the early years. Only 30% of teachers agreed that those students needed a different curriculum in the primary years.

The second and important concern is differentiating curriculum regarding the needs of gifted young children in their classroom. Teachers do play an important role in the prevention of bad study habits, social behavior and self-esteem problems and disinterest, underachievement and boredom in school by this group. Preschool gifted children require teachers who provide learning opportunities-intellectual, social and personal- which facilitate positive school life adaptations. Yet, working with these students often involves dealing with their boredom because of repetitive, unchallenging tasks and their frustrations because they are unable to accomplish

tasks due to growth or developmental discrepancies (Bishop, 1968). These difficulties are overcome with differentiation of practices. These practices are formed in line with the teachers' perception.

Teachers are taught to modify their instruction by assessing and being responsive to students' needs, interests, and abilities. One particular type of student with needs that differ from those of their peers is the "gifted" student. Differentiation is seen as a way to help students who underperform within their grade levels rather than enriching curriculum for students who are above their grade level. Besides that, teachers tend to put gifted children as a leader in a group work to make sure others complete the task for tutoring (Hertberg-Davis, 2009). However, differentiated curriculum has different perspectives that teachers need to possess.

Differentiation is used to expand the core curriculum to push students through further understanding or discovery and satisfy the needs of able gifted students with challenging curriculum (Samuels, 2005). Gross (2004) put out the role of teachers in differentiation.

The teacher's main role is to create an atmosphere where students feel comfortable sharing their unique perceptions and then guide them by differentiating the curriculum and instruction. Teachers' role is identified from different perspectives on the study. It is stated that teachers are expected to be proactive, rather than reactive. It means that teachers needs to plan the lesson before it is practiced to meet the diverse needs of the children rather than adjusting to the differing needs of the students after the lesson (Tomlinson et al., 2003). Small teaching-learning groups benefits students during instruction variable pacing. Early finishers need to have opportunities to utilize their extra time with activities that will engage them instead of waiting for others (Tomlinson, et. al., 2003).

Differentiation is knowledge-centered, teachers need to use their content knowledge along with their pedagogical knowledge to create meaningful lessons for students. Differentiation is difficult for teachers since barriers of implementing differentiation exist. These are displayed as lack of confidence, efficacy, and perseverance by Hawkins (2009). It explains the struggles that teachers encounter

when trying to implement differentiation and why implementing differentiation is so difficult.

First, teachers need to have high self efficacy belief to differentiate curriculum and instruction. Teachers' belief system supports differentiating instruction as a successful pedagogical method that uses student differences of readiness, interest and learning profiles to ensure achievement. Teachers' knowledge of instructional innovations, classroom management strategies and their depth of content knowledge all contribute to their ability to sustain efficacy.

Every student deserves the opportunity to learn in a way that best suits him or her. Gifted students need challenging teaching on their own levels in order to reach their fullest potential. Although researchers may still be trying to determine at what age this giftedness can be evaluated, young gifted children still need to have the opportunity to learn on their own levels. This is critical since children frame their attitudes about school as early as preschool, and those attitudes stay with them throughout the rest of their years in school. These students deserve challenging programmes as early as preschool so that they can actualize their potential.

The perceptions of early childhood teachers regarding how to handle giftedness in children in their classroom and whether educators can even identify them at this age contribute to how much challenging these students receive in the classroom. Gifted young children are struggling learners, these gifted students are going to suffer if they do not receive some type of programming designed to meet their distinguished needs.

2.5. Research on Teachers' Attitudes and Perception Towards Gifted Children

Mcoach and Del Siegle (2007) reported that teachers can play an important role to change attitudes in general education towards gifted education. Gifted education teachers are unable to make necessary changes for gifted education in curriculum and instruction without the support of regular education teachers and administrators. Teachers are also essential for identification.

Gifted children can be identified quite early on. The longitudinal study conducted by Gottfried, Bathurst, and Guerin (1994) indicated that higher abilities could be detected as early as 18 months. Roedell, Jackson, and Robinson (1980) investigated the quantitative and qualitative ways that gifted preschoolers use to express their abilities. The fact that gifted children have the tendency to engage in social comparisons earlier than their peers can serve as an indication for teachers (Robinson, 1993). Researchers have investigated how teachers' beliefs about giftedness might contribute to their accuracy in identification. According to some, teachers have a tendency to regard giftedness as achievement rather than potential (Freeman, 1979; Lee, 1999), whereas in another study (Plunkett, 2000b) potential was considered to be more important. Lee (1999) concluded that teachers regarded motivation for achievement as a critical element of giftedness. Although observation is part of the identification process, teachers require the necessary skills for observations and must be aware of child development and gifted characteristics (Barbour, 1992; McBride, 1992; Shaklee, 1992).

Hodge and Kemp (2006) conducted a study in which the effectiveness rate of teacher identification of giftedness proved to be below 60%. High achievers in class were generally recognized more frequently, while children whose abilities didn't manifest as academic achievement were seen only to be above average. Parent and child data showed that some children were not revealing the true extent of their abilities, especially nonverbal ones.

Copenhaver and Intrye (2010) conducted a study to see if there are perceptual differences between elementary and secondary teachers' views on gifted children. The result showed that a perceptual difference exists in the way of identifying and educating gifted children. The implication of the study is that there is a strong need for grade specific pre-service and in-service course work and involvement with gifted students. Bangel, Moon and Capobianco (2010) examined the effectiveness of a combined strategy for pre-service teachers, consisting of a course on gifted education and a 9-week practicum with the aim of increasing participants' understanding of the characteristics and needs of gifted children. Through semistructured interviews, participants' perceptions of the effects of the course and practicum on their understanding of gifted students' characteristics and needs were

examined. Participants perceived an increase in their understanding of the needs and characteristics of gifted students and their confidence in their general teaching abilities by attending the course and taking part in the practicum.

In general education, teachers face difficulties in meeting the needs of gifted children since each classroom teacher is responsible for many students whose needs leave less time to dedicate to the need of gifted children (VanTassel-Baska, & Stambaugh, 2005). In order to meet the need of gifted students, an inclusive setting based on flexibility, acceleration, and variety must be facilitated. However, that there is no single model that can adequately address all the needs of all gifted students (Feldhusen, 1982; Rogers, 1998; Feng, VanTassel-Baska, Quek, Bai & O'Neill, 2005).

McKay (1993) argues that the perceptions, attitudes and understanding of teachers in general education classroom towards gifted children determine the support given to those students in the environment of a regular classroom. According to research, general education teachers tend to be less tolerant towards exceptional students including gifted ones, in comparison to teachers who have received specialized training (Nicely, Small, & Furman, 1980; Jones & Southern, 1992).

Cramond and Lee (2004) replicated studies by Tannenbaum (1962), and Cramond and Martin (1987) on pre-service and in-service Korean teachers with similar results leading to the conclusion that attitudes toward giftedness are overall not positive.

Pierce and Adams (2000) conducted a study on changing teacher attitudes. Their participants consisted of two groups and their results showed no significant differences between the responses of pre-service and in-service teachers with both groups having moderately positive attitudes for gifted students. These findings are supposedly explained by the fact that all participants receieved gifted education coursework or workshops. The attitudes of participants of those courses and workshops deviate from a randomly selected group of teachers. The most pertinent result is that positive attitudes were obtained from teachers that participated in gifted education workshops. Therefore, results support the idea that additional educational opportunities on gifted education are in correlation with more positive attitudes

toward gifted students (Rubenzer& Twaite, 1979; Starko & Schack, 1989; Rash & Miller, 2000).

The results of a study conducted by Begin and Gagne (1994) summarizing 30 other studies, teachers who have experience with gifted children tend to have a more positive attitude toward them when compared with teachers who have no experience with gifted children. Contact with gifted children, past participation in a gifted program, the presence of a gifted program in a participant's school, and perceived knowledge of giftedness were statistically significant predictors of attitudes toward the gifted in the majority of studies which included these variables.

Hansen & Feldhusen (1994) conducted a study comparing the performance of teachers with and without experience of gifted children in their classroom by asking the students about their classroom activities and observing the teachers. Teachers who have received training on gifted education scored significantly higher than untrained teachers on their attitudes toward gifted children.

Denise (2008) found that preschool teachers had more favorable attitudes toward grade skipping in the case of gifted children than other grade level teachers. Equal opportunity generally meant for them that programs must be adapted to meet the specific needs of each student.

One study refutes the assessment that special training affected the perceptions and attitudes of the teachers (Awanbor, 1991). The results are the in line with the results of Hansen and Feldhusen's (1994) research indicated that the effects of teacher training on gifted education affect teacher effectiveness and competence as much as classroom climate. According to the study, teachers trained in gifted education displayed greater teaching skills and facilitated more positive class atmospheres than teachers who had no training in gifted education. Students of trained teachers reported greater emphasis on higher level thinking skills and on discussion, and less emphasis on lecture and grades than students of untrained teachers.

Research (VanTassel-Baska, Johnson, Hughes, Boyce, 1996; VanTassel-Baska, Zuo, Avery, & Little, 2002; Feng, VanTassel-Baska, Quek, Bai, O'Neill, 2005) has shown that professional development has positive effects on teacher practice

2.6. Research on Giftedness and Gifted Education in Turkey

Although the concept of giftedness is not a new concept in Turkey, the studies on giftedness and gifted children are very limited. Fortunately, there has been an observable rise of awareness with the number of studies that has been conducted in recent years in the literature.

Studies about giftedness which emphasize the necessity of being aware of gifted children in Turkey are carried out by stating general facts. Meeting the needs of gifted children in Turkey is regarded from the perspective of democracy. Celkan (1991) stated that it would be against the principle of equal opportunity in education if the needs of children requiring special education are not met. Ergün (1992) argued that equal opportunity in education is only possible with appreciation and improvement of all talents.

One of the studies took giftedness into consideration in terms of sociology. Levent (2011) argued that it is the duty of the government to provide education and establish solidarity of the community. It is stated that the wellbeing of society is in correlation with the wellbeing of individuals. A population of 2% of the society with differentiated needs in education must be served in order to secure their contribution to society.

When giftedness is approached from the perspective of economy, Erkal (1992) considers gifted students as human values of the country. He argues that if these values are not appreciated and utilized, economic development of the country will be adversely affected and gifted individuals will seek education opportunities elsewhere, leading permanent loss of human potential. Bilgili (2004) states that gifted individuals as a scarce human resources are essential economic assets for a country's development, vision, international standing and future.

Below, the reasons of importance of providing differentiated education and counseling services to gifted are listed (Özsoy, Özyürek ve Eripek, 2002; Karakurt, 2003; Akarsu, 2004; Akkanat, 2004).Gifted individuals are a valuable economic asset who can contribute significantly in their own domains to business, science,

technology, arts, services not only in countries they are born in or emigrate to but also to general civilization in the competitive environment of the 21st century based on information and creativity. Since gifted students are potentially researchers, scientists, military leader and creative artists of the future, not taking the necessary precautions regarding their education would mean risking the country's future. Unless these students are recognized and supported at home, school or in their environment, their giftedness can become a burden hard to bear. This can cause problems not only for the student, but also for those in relation with him/her. Elementary and to a certain degree, secondary education programs are designed to address the needs of students with medium skill levels. This allows the gifted to succeed without using their full potential. As a result, their information acquisition lags behind their cognitive level and they lose interest in education programs. Gifted may resort to harming themselves and their environment unless they are unable to find the opportunities for self-realization and production. Given the right direction at early ages, the development of gifted individuals can be accelerated; thus resulting in earlier contributions to society. The efforts aimed at finding different methods of education for these students will in turn contribute to general education and help its advancement.

Regarding the situation in Turkey of this group of individuals who are considered an asset for the society given the proper recognition, Ataman (2003) claimed that gifted children are the group least properly known under the umbrella of special education. This group also suffers from the lack of appropriate educational supplies. Prevailing misconceptions towards gifted children exacerbate the situation. Some of these misconceptions are that gifted children do not need educational differentiation since they can succeed under any under any circumstance. Different education to be provided to them would bring about an elite group and lead to conflicts in the society. Children are already being assigned to schools according to their test scores and gifted children can be adequately served within this structure since they would easily get into top tier schools and they do not require special education.

Ataman (2003) states that there are still systematic problems in Turkey regarding gifted education in the 21st century. According to Akarsu (2004), even though Plato proposed a system for training statesmen, there were special institutions throughout Seljuk and Ottoman periods, some insufficient steps were taken after the foundation of the Republic and an increased interest in the area emerged in the 1990's, still in contrast to global trends efforts at providing adequate gifted education are limited to initiatives taken by certain foundations, institutions, professionals and parents.

Enderun schools are considered as a model for gifted education in Turkey. Enç (2004)'s study giving detailed information on enderun schools. Akkutay (2004) detailed the establishment, aims and goals, the procedures until their closure. Akarsu (1991) dealt with eligibility criteria and aims of enderun schools and compared these institutions with modern gifted education.

In Turkey there are several studies which are giving detailed information about gifted children's characteristics. Çağlar (1972) provided detailed information about their personal, vocational, social, cognitive and physical characteristics. In her work about potential intelligence, measurement of intelligence, models defining intelligence and brain research, Akarsu (2001) gave information about the models of education being applied in Turkey and Europe. Ataman (1996) published a study on developmental characteristics of gifted children as well as applicable education models.

Common education models used for directing children with superior abilities can be grouped under headings which are starting school early, acceleration, ability groups, special class, program enrichment (Çağlar, 2004). Davaslıgil (2004) gave information about acceleration, enrichment and differentiation models and conducted a study on differentiated education programs applicable in early childhood. In this study, she emphasized teaching basic skills, promoting high thinking processes, encouraginf learning through exploration.

Ersoy and Avcı (2001) stated that students must be identified through a comprehensive assessment using a multidisciplinary approach and multiple

assessment tools. Akkanat (2004) expressed that in counseling and research centers in Turkey, gifted children are identified through intelligence tests. Ataman (1996) mentioned the possibility that while those children who perform much above their age group are recognized, those that perform only relatively better might be overlooked. It has been expressed that these tests are problematic in terms of validity and reliability when applied in preschool and even during primary education they might fall short of identifying gifted children since their particular intellectual domains haven't developed completely.

Early and reliable identification is the first step for providing the gifted children with the appropriate environment where they can develop their talents and potential. Studies indicate that practical and non-expensive scales are required to identify gifted kids in early childhood (Darga, 2010). However, since the talent spectrum of the child hasn't crystallized yet, the validity and reliability of tests used for identification in preschool are questionable (Ataman, 2000). Assessment is reaching judgments by analyzing data acquired through objective or subjective sources according to certain criteria (Özgüven, 2007). In particular, assessment is a process whereby information is collected about students' characteristics such as intelligence level, creativity, motivation and leadership and decisions are made regarding their intellectual capacities (Sak, 2008). The aim is to determine goals most suitable with the needs of, talents of and services provided to the students rather than mere curiosity or labeling (Sak, 2008). In order to preserve resources, the steps of application, scanning/nomination/referral, testing and decision are followed in the identification of gifted individuals (Sak, 2010).

According to Demirbaş (2009), the education and identification of the gifted is mainly undertaken by Art and Science Centers. Teachers can nominate their students by using an observation form. These students are then tested individually, and those who are identified as gifted start attending Arts and Science Centers along their regular education.

In her study explaining the required regulations regarding gifted education in Art and Science Centers, Dönmez (2004) gave detailed information on establishment, aims, procedures of Arts and Science Centers as well as the teachers'

characteristics. Most of the studies on the characteristics and education of gifted children are conducted within Arts and Science Centers (Gökdere &Çepni, 2004; Kontaş, 2009; Gökdere, Çepni, Küçük, 2011). The importance of the positive impact on implementation and policies of the research on Arts and Science Centers cannot be denied. However, there is a lack of leading studies on identification of gifted children, their education, the role of teachers and their need regarding general education system.

Enç, Çağlar, Özsoy (1987) emphasized the necessity of early identification of gifted children and providing the necessary education needed by gifted children. It is underlined that unidentified gifted children mean an important loss of potential for the society which cannot be regained. According to Baykoç & Kurt (2004), early childhood phase is important for the individual due to rapid changes and developments. The role of education is essential in determining the direction of change and development. Identifying children's interest, talent and skills in early childhood can direct their education. The appropriate education of gifted children in their early years will help them develop and display their skills and talents in later years of their lives. However, there are no specialized programs for gifted children under the age of seven, thus the identification of them is not given priority. It is obvious that early identification would result in the formulation of early measures as well (Davaslıgil, 2004).

A study was conducted by Gür (2010) with the aim of determining the reliability of teachers' evaluations of the giftedness among six year-old children. It was also examined whether gender was an effective factor in the evaluation of teacher. 28 gifted and 28 non-gifted children in regular classes from private kindergartens were included in the study. A checklist was used as the evaluation instrument and scores of gifted children were compared with those of non-gifted children. The study found significant differences between the scores of gifted and non-gifted children whereas the gender factor proved to be insignificant. This study concluded that a checklist to be completed by preschool teachers can be used as a pre-evaluation instrument in Turkey for six year old children.

A study was conducted to investigate if there were significant differences between the drawing of gifted and non-gifted children at the ages of 4-5. Children's human figure drawings were evaluated. The results indicated that drawings of gifted children, particularly female gifted children, were more detailed and developed. The drawing skills of 4 year old gifted children were found to be equal to those of 5 year old non-gifted children (Dağlıoğlu, et. al., 2010).

Baykoç (2004) stated that the development of basic human characteristics is completed between the ages 0-6. Therefore, accurate identification of gifted children in their infancy and preschool periods through proper evaluation methods will help support and develop their talents better and thus result in greater contribution to society. In another study, Baykoç (2009) gave detailed information on characteristics of gifted children and their cognitive, social, emotional and linguistic development.

Dağlıoğlu (1995) used teacher observation form, general talent test and WISC-R test in her study regarding the identification of gifted children in elementary school. The study showed that the teacher evaluations based on observation forms had an accuracy of 22.44%.

İnan, Bayındır and Demir (2009) found out that teachers were prone to confuse the characteristics of successful students and gifted students. The results showed that teachers are not aware of the characteristics gifted children possess. This is because they do not have information enough to distinguish them from successful children. They underline the importance of providing education especially in service training to teachers about gifted children.

Gökdere and Ayvacı (2004) conducted a study with the aim of determining the level of knowledge of primary school teachers about giftedness concept. The study was conducted with the participation of 55 teachers from Trabzon. The results indicated that primary school teachers lacked sufficient information regarding the characteristics of gifted children. To prevent adverse effects on the education of gifted children of this knowledge deficiency, teacher education both before and during the service put more emphasis on the concept of giftedness.

In conclusion, there are studies regarding the concept of giftedness in Turkey which define the concept, emphasize its importance and address its status within the education system. Possible reasons for the lack of necessary attention to gifted education are mentioned. The publications on the characteristics of gifted children provide detailed information and definitions. In addition, suggestions for gifted education and definition of widely used education models are mentioned. There are studies describing the main education model for the gifted in Turkey, namely Art and Science Centers (BİLSEM) as well as studies conducted with teachers and students within the education model of Bilsem. However, although there are views suggesting that giftedness can be identified in very early ages, no studies regarding gifted students and teachers in preschool period were discovered except the limited number of studies mentioned above.

CHAPTER III

METHOD

The method of research used is presented in this chapter. It includes descriptions of participants of the study, instruments, data collection and data analysis procedure, validity and reliability of the research.

3.1. Sample

The purpose of the present study is gaining insight about teachers' perception regarding young gifted children. Concerning the perception the study is designed to obtain self reported needs and self-efficacy beliefs of teachers to meet the needs of gifted children in terms of identifying needs of gifted children and providing differentiated instruction. The study is framed to explore teachers' perception on the concept of giftedness, the characteristics of young gifted children and educational implications in preschool to meet the needs of young gifted children. In the light of literature review, components of perception were evaluated. The study is a qualitative study with 15 participants.

The convenience sampling was used by considering willingness and availability of participants. The participants were early childhood teachers who were working with children at the age of 5 and 6. The participants of the study vary in educational backgrounds, types of schools and years of experience. Participants of the study were invited to be participated in the study. Five of the teachers were working in public schools and 10 of the teachers were working in private schools (Table 1).

Table 1.

Types of Schools

Type of Schools	Number of Teacher
Private school	10
Public school	5
Total	15

Early childhood teachers that participated in the study show variation in their education background. Twelve of them were graduated from a university. Three of them were graduated from Open Education Faculty. Two of the teachers were with a university degree were continuing their graduate education in early childhood education. Two of the teachers that had a university degree were continuing their graduate education in a different field of education. Table 2 displays distrubisiton of of teachers regarding their level of education.

Table 2.

Teachers' Level of Education

Levels of Education	Number of Teachers
Continuing Graduate Degree	4
Undergraduate Degree	8
Open Education Faculty	3
Total	15

Work experiences of early childhood teachers that participated in the study are summarized by the Table 3.

Table 3.

Years of Experience of Teachers

Years of experience	Number of Teachers
1-3 years	4
4-6 years	7
7-10	4
Total	15

Educational backgrounds of teachers on gifted children indicated variations within the sample of the study. All of the teachers had taken a course related with gifted children in the university that was called as Special Education. Five of the teachers had taken seminar about development of gifted children and four of them took in-service training about gifted education. Table 4 demonstrets the demographic information on educational background of teachers.

Table 4.

Educational Backgrounds on Gifted Education

Educational Background of Teacher	Number of Teacher
Course in University	15
In-service Training	4
Seminar	5

3.2. Instruments

The data is obtained by using semi-structured interview since semi-structured interviews allow the interviewer to get into participants experiences and feelings about the concept by offering flexible and open atmosphere (Fraenkel & Wallen, 2006). Interview questions were formulated by the researcher and reviewed by two experts from early childhood department of the university. Literature review on early childhood teachers' perception regarding young gifted children was examined to design the interview questions.

Investigating the literature review on the perception of teacher's regarding young gifted children, the dimensions and variables of teachers' perception on young gifted children were determined. The following dimensions of teacher's perception on young gifted children were selected; perception on intelligence, perception on giftedness, understanding the characteristics of gifted children, perception on the way of gifted education, self-efficacy beliefs on practicing and needs of teachers in the classroom with gifted children.

The interview consists of fifteen questions. These questions were designed to extract three types of information from the participants. The first type of information is demographic. The second type of information to be gained by interview questions is related to the perceptions of participants on young gifted children, in terms of intelligence, giftedness and characteristics of gifted children and education of gifted children. The third type of information deals with the self-reported self-efficacy beliefs and needs of teachers with gifted children in their classrooms.

Prior to the full scale implementation of the study, two pilot studies have been conducted. The first pilot study included interviews with five early childhood teachers who were asked twenty five questions. The first pilot study results have shown that the questions were not yielding valid results in accordance with the aim of the study. Therefore, the number of questions was decreased following an examination of the questions. Close ended and leading questions

were left out of the study in order to give more room to teachers to express their ideas and the questions were rearranged with the aim of improving clarity.

The redesigned interview was implemented via a second pilot study with five different early childhood teachers. The results of the pilot study revealed that certain questions required changes to improve validity. The question "*Did you have a course during teacher training about gifted education?" (Öğretmenlik eğitiminiz sürecinde üstün zekalı çocukların eğitimi ile ilgili hiç ders aldınız mı?)* was extended with the additional question "*Can you tell me more about the content of the course?"(Aldığınız dersin içeriği hakkında bilgi verir misiniz?*) to get an idea about what the subject of the course was. The question "*Did you find the course you took beneficial in your classroom implementation?" (Aldığınız bu dersin sınıf içi uygulamalarınızda yararlı olduğunu düşünüyor musunuz?)* is added also to have ideas of participants regarding effectiveness of the introductory course in their teaching practices. Remaining questions were clearly understood by the participants, answers were consistent with the questions and no changes were deemed necessary. Expert opinions were consulted. The content and face validity assessment of the semi-structured interview was conducted by an expert in the department of Early Childhood Education (See Appendix B).

3.3. Data Collection Procedures

First step of data collection was receiving approval from the Applied Ethics Research Center in Middle East Technical University. After it was received, application of interview started. Participants were invited before they got interviewed due to sampling procedure was convenient. Participants were informed on the aim of the study and asked for their participation. Participants signed a volunteer participation form (See Appendix C). Interviews were conducted in appropriate places which were mostly chosen by the participants to make them feel comfortable. The interview was carried out by the researcher; all

interviews were audio recorded to ensure that all the information was obtained. The duration of interviews varied between 30 and 50 minutes.

3.4. Analysis of Data

Content analysis was used to analyze data as it is a technique that allows researchers analysis of communication (Fraenkel & Wallen, 2006). This process of reporting main contents of written data and their messages was used with any written material including documents from interviews (Cohen, Manion, & Morrison, 2007). As data analysis methods, the data are firstly coded to develop themes to facilitate synthesis (Fraenkel & Wallen, 2006). Coded data was categorized to get themes that provided frequency of each code or word in the text under each category. Based on the developed themes, related direct quotes from the interviews were selected. The results and findings of the study include those quotes and the analyzing of the theme is presented.

The interviews are transcribed by the researcher and software writings were obtained. The coding was started by reading every written interview papers in detail and determining the codes. A code is a word or abbreviation sufficiently close to that which it is describing for the researcher to see what it means (Cohen, Manion, & Morrison, 2007). Data was studied to see each word or sentences which are meaningful for the study. This procedure was applied for every interview. By considering the relation between meaningful parts, the categorization of codes was done. Categories are the main groupings of constructs or key features of the text that indicates connections between units of analysis (Cohen, Manion, & Morrison, 2007). Coding and categorization were conducted for each question differently based on the answers. After the process of coding and categorizing, themes are determined and data analysis started with the counting of frequencies of words.

3.5. Validity and Reliability

According to Croswell (2007) qualitative studies require some techniques to strengthen the quality of the result of the studies. Eight strategies are defined to increase credibility and validity of qualitative studies. Prolonged engagement and persistent observation in the field, triangulation, peer review, refining hypotheses as the inquiry advances, clarifying researcher bias from the outset of the study, member checking, rich and thick description, and external audits. It is stated that applying two of the strategies provides enough validity for a study. In this study, peer review and rich and thick descriptions were used for the trustworthiness of the research. Peer review is the analysis of the data by multiple coders. In the study two different coders worked to analyze the findings. The researcher was the first coder and a graduate student from early childhood department was the second coder of the study. Both of the coders analyzed the codes, the codes of two coders were compared; the intercoder reliability reached through the analysis is %83. The categorization of the codes was decided after the comparison and analysis were made by the coders. The second strategy is giving rich descriptions of data gathered from participants. These descriptions let readers process credibility of the study.

CHAPTER IV

FINDINGS

The major purpose of the study is examining the early childhood teachers' perceptions on young gifted children. The perception of early childhood teachers are examined within different sub categories: teachers' perception of giftedness, perception of the characteristics of young gifted learners, perception on programming for gifted learners. Related with the perception of early childhood teachers on young gifted children, early childhood teachers' self reported needs and self efficacy beliefs to meet different needs of young gifted children are investigated.

There were 15 participants. Early childhood teachers were invited to be participants of the study. Five of the teachers were working in public schools and ten of the teachers were working in private schools. 12 of them were graduates of university and 3 of them were graduates of Open Education Faculty. Two of the teachers that had a university degree were continuing their graduate education in early childhood education. All of the teachers had taken a course which is introducing gifted children during their undergraduate education.

The findings are illustrated in accordance with research questions and belonging sub-questions;

4.1. How do early childhood teachers perceive giftedness?

Perception of giftedness has been questioned with sub-questions which are presented respectively;

How do early childhood teachers define intelligence?

How do early childhood teachers define giftedness as a concept?

4.1.1. How do early childhood teachers define intelligence?

Early childhood teachers were asked about their ideas related to definition of intelligence to reveal how early childhood teachers perceive intelligence. These findings were necessary to show which definition model is preferred by them to direct their practices in their classrooms. By analyzing the data, three dominant views are derived which create themes. Teachers define intelligence by considering three models;

Biological Model: (n =3)

Domain-Specific Model: (n=2)

Cognitive Model: (n=10)

Biological model perceives intelligence as an inborn potential. Most of the teachers stated that intelligence is a potential that is in the child and need to be stimulated by their environment. Teachers expressed that;

> *"Intelligence is a genetically inherited potential. Intelligence can also develop with experiences. Intelligence develops with learning and I think that development of intelligence changes in proportion to environment and the family." ("zeka kalıtımla gelen bir potansiyeldir, aynı zamanda yaşantılarla gelişebilir, zeka öğrenme ile gelişir ve bunun çevresi ve ailesi ile doğru orantılı olarak değiştiğini düşünüyorum")(T_9)*

> *"Intelligence is necessary for learning; it things progresses and develops with social experiences. I think that it is inherited and develops by environment. For development of intelligence school, family, peers and communication are important" ("Zeka bir şeyle öğrenmek için gereklidir, sosyal deneyimlerle ilerleyen ve gelişen bir şey olduğunu düşünüyorum, doğuştan gelen ve çevreyle gelişen bir şey, zekanın gelişmesi için okul, aile, arkadaşlar ve iletişim önemlidir") (T_7)*

> *"as some educators express a child is born without knowing anything, intelligence develops through his/her experiences, stimulations coming from environment and education. It is inherited and environment is very important" ("Bazı eğitimcilerin söylediği gibi çocuk hiçbir şey bilmeden dünyaya geliyor, zeka yaşantılar, çevresinden gelen etkiler ve eğitimle gelişir. Zeka doğuştan gelir ve çevre çok önemlidir.") (T_1)*

Two of the teachers defined giftedness by considering multiple intelligence theory which is themed as *Domain Specific Model.* Teachers accept the biological nature of intelligence and refuse that intelligence merely reflects academic achievement and defend that intelligence can show itself in areas of arts and sport.

> *" I believe in Multiple Intelligence Theory and think that each child has different intelligences. It's basic reasons and level is rooted biologically and develops by virtue of schooling. But the child may have musical and things to develop that intelligence type should be in the environment. But intelligence could be in area of sport or art. It should not be defined as merely mathematical intelligence" ("çoklu zeka kuramına inanıyorum ve her çocuğun farklı zekalara sahip olduğunu düşünüyorum. Zekanın temel bir sebebi ve seviyesi var yani biyolojik, okul sayesinde de gelişebilir. Ama zeka müzik alanında da olabilir ve çevresinde müzik zekasını geliştirebilmesini sağlayacak şeyler olmalı, sanat alanında olabilir, spor alanında olabilir, zeka sadece matematik zekası olarak tanımlanmamalı") (T_{15})*

> *"I feel myself closer to Multiple Intelligence; each child has different intelligences, for example one child may have high verbal intelligence and low mathematical intelligence or the contrary."("Ben kendimi çoklu zekaya daha yakın hissediyorum, her çocuk farklı zekalara sahiptir, mesela sözel zekası yüksek olabilir, matematik zekası düşük olabilir ya da tam tersi.") (T_{13})*

Analysis of data shows that most codes are categorized under the theme of *Cognitive Model* which refers to the value of functions of brain. Teachers who believe that cognitive brain functions constitute intelligence stated;

> *"..intelligence is thinking ability. Intelligence can be developed by doing lots of verbal and numerical activities and activities relevant to interest areas." ("...zeka düşünme becerisidir. Çok fazla sayısal ve sözel etkinlikler yaparak, ilgi alanlarına ilişkin etkinlikler yapılarak daha geliştirilebilir") (T_{14})*

> *"Intelligence is the power of the brain, by providing challenging activities, open-ended questions, activities which allows the child to establish relation of causality between concepts intelligence can be developed. ("zeka beyin gücüdür, zeka çocuğun gücün aşan, onu daha ileri götürebilecek etkinliklerle gelişir. Açık uçlu sorular sorarak, olaylar arasında neden sonuç ilişkisi kurmasını sağlayacak zeka geliştiren etkinlikler yamak zekayı geliştirir.") (T_{10})*

"Intelligence is creativity, creative thinking. To develop intelligence creative activities should be provided."("zeka yaratıcılıktır, yaratıcı düşünebilmektir. Yaratıcı etkinlikler olmalı zekanın gelişmesi için") (T_5)

4.1.2. How do early childhood teachers define giftedness?

There were questions to address the belief of early childhood teachers regarding the nature of giftedness. The answers from early childhood teachers coded according to specific themes are presented.

Excellence: (n=9)

Potential: (n=2)

Noticeable: (n=4)

Excellence theme is framed through the data which defines giftedness as displaying excellence in one or more areas. Utterances revealed different codes which are presented as specific excellence, all around excellence, speed of acquisition. Regarding excellence theme one of the teachers put forward an opinion that is about all-around excellence;

"*When I say giftedness, the image of child who learned to read by him/herself, has good relations with numbers, comes to my mind. I think that these children can do anything." ("üstün zeka deyince kendi kendine okuma yazma öğrenmiş, sayılarla arası çok iyi olan çocuklar geliyor aklıma bu çocuklar ın her şeyi yapabileceğini düşünüyorum.")(T_{11})*

"Gifted child has more knowledge and ability than his or her age mates" "(Üstün zekalı çocuk kendi yaşıtlarına göre daha fazla bilgi ve beceriye sahip olan çocuktur.") (T_3)

Code of *speed and accuracy* of learning is called as;

"Children who can learn an ability or a concept, more rapidly, fluently and deeply than their age mates" ("kendisiyle aynı yaş grubunda olan çocuklardan, bir yetiyi yada konuyu daha hızlı öğrenebilen daha çok ve daha akıcı şekilde öğrenebilen çocuklardır.")(T_{10})

Special excellence code categorized under *excellence* theme is expressed by teachers with utterance that;

> "*Children who are better in the cognitive area" ("bilişsel alanda ileri olan çocuklardır.") (T_5)*
>
> *"Child who is better in an intelligence area like cognitive, verbal "(her hangi bir zeka alanında (bilişsel, dilsel) daha ileri olan çocuktur") (T_6)*

The second theme *Potential* presents that gifted children have the potential to complete any kind of task. It is stated by teachers;

> *"Gifted children have higher potential and ability to be successful in more areas than their age mates." ("üstün zekalı bir çocuk yaşıtlarına göre daha yüksek potansiyeli olan, daha çok alanda başarılı olma yetisine sahipti.r.") (T_7)*
>
> "*children who have higher potential to learn, they can do what their age mates cannot do and learn more rapidly than their age mates "(öğrenme potansiyeli daha yüksek olan çocuklardır, yaşıtlarının yapamayacağı şeyleri yapabilirler. Onlara göre daha çabuk öğrenirler) (T_1)*

The third theme *Noticeable* is identifying giftedness as differences which are seen on the behaviours of children considering the common age group;

> *"Have the ability to think differently"("farklı düşünebilme yeteneklerine sahiptirler")(T_{12})*
>
> *Children who perceive the world and their environment differently, they acquire information selectively" ("dünyayı daha farklı algılayabilen çocuklardır, çevresini daha farklı algılarlar, bilgileri daha süzerek alırlar") (T_2)*
>
> *"In any area children who are like İdil Biret" ("herhangi bir zeka alanında sanat olabilir İdil Biret tarzı çocuklardır") (T_{15})*

To see if their ideas come from any experience with gifted children, teachers were asked if they ever encountered with a gifted child or person. Teachers (n=6) expressed that they have seen gifted child;

"I saw a child who was 3 years old and told me about Darwin's Theory and said that he believed it" ("okulda gördüm, çocuk 3 yaşında idi ve Darwin'in teorisini anlattı bana ve buna inandığını söyledi") (T_5)

"I have a nephew. He started to read when he was 4 and moved to a higher grade in his school" ("benim kuzenim var 4 yaşında okumaya başladı ve sınıf atladı") (T_{14})

There were teachers (n=5) who stated that they have never seen a gifted child. Rest of teachers (n=4) expressed that even though did not see a gifted child, they encountered children who could be gifted;

"I haven't seen a gifted child, but I had children who were noticeable, learned more rapidly compared to other children and who I think were intelligent" ("üstün zekalı bir çocuk görmedim ama sınıfında diğer arkadaşlarından daha fazla ön plana çıkan, çabuk öğrenen ve benim zeki olduğunu düşündüğüm öğrencilerim oldu") (T_9)

"*There have been children in my class who I think were gifted for instance they had different interest areas than their age mates." ("sınıfımda yetenekli olduğunu düşündüğüm öğrencilerim oldu mesela ilgi alanları yaşıtlarına göre çok farklıydı*") (T_{10})

4.2. How do early childhood teachers perceive characteristics of gifted children?

Early childhood teachers' ideas on the characteristics of young gifted children is examined with sub-questions regarding how they define gifted children by using the characteristics of young gifted children. The questions aim to come up with the picture in their mind regarding gifted young children. These findings are crucial for the researcher to understand which characteristic of gifted children is mostly announced by the teachers. Regarding the teachers' perception on the characteristics of young gifted children, the awareness level of teachers on characteristics of gifted children is investigated.

4.2.1 How do early childhood teachers define characteristics of young gifted children?

Can you define gifted children with five adjectives?

What do you think could be the most visible characteristic of gifted children to identify them?

The answers of both questions are categorized under six different themes which expressed the characteristic of gifted children;

Cognitive Characteristics (n=24)

Specific Academic Abilities (n=3)

Psychomotor Characteristics: (n=8)

Social –Emotional Characteristic: (n=20)

Creative Abilities: (n=9)

Leadership Abilities: (n=7)

Cognitive characteristics of gifted children are mostly announced and presented as it is;

- High capacity to process information (n=7)
- Rapid learning ability (n=6)
- Strong curiosity (n=5)
- Asking questions (n=4)
- Keen observer (n=1)
- Alertness (n=1)

Specific Academic Abilities are rarely figured out;

- Talented (n=2)

- Persistent on task or interest (n=1)

The *psychomotor characteristics* of gifted children are informed with only by stating;

- High degree of energy (n=8)

Social-emotional characteristics are expressed with the codes;

- Social vulnerability (n=11)
- High social abilities (n=6)
- Motivated (n=2)
- Easily bored (n=1)

Creativity Abilities as characteristic of gifted young children is stated as;

- Creativity (n=8)
- Thinking differently (n=1)

Leadership ability is stressed with characteristics those are;

- Leader (n=1)
- Self-confident (n=2)
- Responsible (n=1)
- Ability to communicate with adults (n=2)
- Having solutions to social problems (n=1)

4.2.2. Which do characteristics of young gifted children do early childhood teachers' agree/disagree with

Early childhood teachers' perception towards characteristics of young gifted children is examined with a question. That question contains the characteristics of gifted children which are defined in the literature; teachers' answers are categorized to see the frequency (as shown in Table 5) according to their agreement status.

Table 5.

Teachers' Agreement Status on Stated Characteristics of Young Gifted Children

	Agree	Not Agree	Not decided
Has varied interests and exhibit curiosity	15	-	-
Demonstrate high level of verbal ability	5	2	8
Ability to learn quickly	15	-	-
Perfectionism	7	3	5
Boredom	15	-	
Comprehend abstract subject matters	9	-	6
Creativity	9	2	4
Always successful	2	12	1
High degree of energy	6	1	8
Excellent memory ability	11	1	3
Early reading ability	8	1	6
Has adaptation difficulties	4	3	8

Table 5 (continued)

Leadership ability	6	4	5
Expanded interests on like adult issues	10		5
Comprehend advanced subject matters	5	1	9
Comprehensive synthesis ability; reasoning	13	-	2
Has long attention span	6	4	5
Has difficulties in following rules	9	-	6

Numbers represent how many teachers agree and disagree or do not decide regarding characteristic. Early childhood teachers were consulted about their ideas regarding gifted children and their characteristics which have to be known by teachers for recognition of different developmental needs of gifted children in the preschool.

4.3. How do early childhood teachers perceive young gifted education in preschool?

Teachers' perception regarding the young gifted education in preschool is asked to get an overall picture of their thoughts on education that must be provided by them.

4.3.1 What do you think about gifted children education?

Analysis of their answers is categorized under three themes. One of them is about *deficiencies in education system* for gifted children (n=6). Teachers says

> *"..they should not be educated in normal public schools. They review the same education as normally developed children. There should be special*

schools for gifted children to educate them in the area of their strengths. Teachers who are responsible for gifted education should not be part of their education by only getting some certificates; I think gifted children should be educated by teachers who received a different education." ("..normal devlet okullarında eğitilmemeliler bence, onlar normal çocuklar ile aynı eğitimi alıyorlar. Onlar için özel okullar açılmalı ki iyi oldukları alanda yetişebilsinler. Öğretmenlerde iki sertifika alıp onların eğitimine katılmamalı bence üstün zekalı öğrenciler için farklı eğitim alan öğretmenler olmalı..") (T_1)

Second one is about *inappropriate educational environment* (n=6). Teachers who believe that education of gifted children is appropriate to meet the needs of gifted children said that;

"*Gifted children have different viewpoints than age mates in the schools. Therefore they may have problems. Since gifted children are rapid learners they would have high energy in classroom. If teachers cannot tolerate those gifted children's behaviour and perceive them as deviant behaviours, gifted children will be unhappy and unsuccessful" ("…. Üstün zekalı çocuklar okullardaki yaşıtlarından daha farklı bakış açılarına sahipler bu sebeple sorun yaşarlar. Kavrama süreleri daha hızlı olduğu için sınıfta hareketli olabilirler, eğer öğretmenleri onları tolere edemezse davranış sorunu olarak algılarsa, çocuk mutsuz ve başarısız olur…") (T_6)*

"*Since intelligence is matched with IQ scores, children who are successful in other areas are not given due importance"("…. Zeka IQ ile eşleştirildiğinden, diğer alanlarda başarılı olan çocukların önemsenmediğini düşünüyorum…") (T_7)*

Third theme is focusing the ideas of teachers which emerged that *teachers have difficulties* in meeting different needs of gifted children (n=3).

"…working with gifted children is difficult just as working with children who are mentally retarded is difficult" ("…nasıl zeka geriliği olan çocuklar ile çalışmak zorsa üstün zekalı öğrenciler ile de çalışmak zordur…") (T_3)

"engaging communication with gifted children is difficult" (..öğrenci ile iletişime geçmek sıkıntı olur…") (T_8)

4.3.2. Do you think that they should be educated in same ability classes or normal age group classes?

The question is asked to see weather heterogeneous or homogeneous grouping is regarded to fit best to the needs of gifted children according to the teachers.

The data revealed themes which are relative to mostly stated educational application of gifted children in schools. Teachers (n=7) stated that the model of *specialized classes* in which children can be with other gifted children, is the best fit educational application. One of those teachers stated that; "

> *"Gifted children should be educated with same ability groups" (" kendi özelliklerine sahip çocuklar ile birlikte edilmeli..") (T_5)*
>
> *"I think gifted children should be educated with the same ability group in special classes in which gifted children can be better supported and realize their potentials" ("..Bence aynı özelliklere sahip öğrenciler ile aynı sınıfta olmalı, öyle bir ortamda daha çok desteklenebilir ve potansiyellerini gerçekleştirebilir..") (T_2)*

Pull-out model stated by teachers (n=6) refers to ideas that children need enriched programmes different than their classmates. However, teachers stated that being with their age group is also important for gifted children in terms of their social and emotional development. Teachers stated that;

> *" ..Gifted children should be in the same group with their age mates in certain hours, but also with same ability groups in appropriate classes from time to time." ("üstün zekalı çocuklar belli saatlerde kendi yaş grubu ile olmalı, zaman zaman da kendi beceri, grupları ile uygun sınıflarda olmalı.") (T_1)*
>
> *" I think gifted children can learn many things by being in same age group classes, but at the same time this may lead children to lose time, therefore gifted children should be educated in different groups regarding different areas according to a structured plan.." ("Akranları ile aynı sınıfta olmasından çok şey alacağını düşünüyorum ama bu zaman kaybı da olabilir bunu engellemek için belli alanlarla ilgili olarak belli bir plan çerçevesinde uygulanmalıdır.")(T_{10})*

One teacher expressed that gifted children should be with their *age group* (n=1) (T_8). Only one teacher stated the *differentiated instruction* is necessary for the education of gifted children (n=1) (T_3).

4.3.3. What are the ideas of teachers on implementations to meet diverse needs of gifted children in their classroom?

Teachers were asked if they had a gifted child in their classroom, what kind of modification in their curriculum they would make. This question is asked to get teachers' ideas about differentiation. Differentiation has elements which are important for implication of differentiation curriculum. The element mostly stated by teachers in their classroom implications is emphasized. Categorization of codes regarding teachers' ideas on implementation of differentiation is structured in themes under four titles;

Acceleration (n=2)

Enriching content (n=1)

Teaching skills (n=2)

Individual studies (n=10)

All teachers expressed that young gifted children have different needs to meet so they are in need of differentiated instruction, content or curriculum modification. Their ideas on how to implement are categorized. First category is about *acceleration* means providing challenging activities above or beyond their levels. Teachers who express that in a way of ;

> *"I support the development of children with additional activities and I do activities from upper grade books.."(".. Ekstra çalışmalarla öğrencinin gelişimini desteklerim, üst sınıflarının kitap uygulamalarını yaparım…") (T_{13})*

> *"..I would apply higher levels of each activity or activities challenging for the level of their child…" ("her etkinliğin daha üst seviyesini ya da çocuğun seviyesine göre zorlaştırılmış olan etkinlikleri uygularım."(T_{10})*

Enriching content was displayed within the answer relevant to the increase of complexity of content. Teachers who preferred to use enriching content stated;

> *"While other children are adding 3 and 5, I would assigning the child activities dealing with double digit numbers …" ("matematik konusunda diğer çocuklar 3 ile 5 I topluyorlarsa ona iki basamaklı sayılar ile yapabileceği çalışmalar verirdim..") (T_{14})*

Most teachers stated the way of differentiation of curriculum for *individual studies*.

> *"..I would work individually with the student in the area of their strengths"(".. öğrencinin ileri olduğu alanlarda özel olarak onunla bireysel çalışmalar yapardım..") (T_7)*
>
> *"I would support the child with individual studies" ("..bireysel etkinlikler ile çocuğu desteklerdim…") (T_2)*

4.4. What are the self reported needs of early childhood teachers to meet the needs of young gifted children?

Early childhood teachers' ideas are investigated to find out which needs are stressed. While the needs are considered, there were two different questions asked. One was about the self-efficacy belief of early childhood teachers related to the education of young gifted children, to find out if they believe they are in need of something or not. The second one was about the overall needs of early childhood teachers to both identify and meet the needs of gifted young children.

4.4.1 What are the self-efficacy beliefs of early childhood teachers on the education of young gifted children?

First the question is asked to get early childhood *teachers' ideas on self-efficacy beliefs* to identify gifted children in their classroom. Two teachers' answers were positively stated their believes;

"I would be so happy, excited, I would research and learn what to do for children who possess gifted characteristics.." ("..Mutlu olurum heyecanlanırım, araştırma yapar ne yapmam gerektiğini öğrenirim..") (T_{14})

There are teachers (n=13) who express their feelings in a negative way to illustrate their self efficacy beliefs.

"*I would panic, I would study on the different characteristics of gifted children" ("paniklerim onu diğerlerinden farklı yapan özellikleri üzerinde çalışmalar yaparım…") (T_{12})*

"I would feel sacred about how to meet the needs of children."("..korkarım onun ihtiyaçlarını nasıl karşılarım diye ..") (T_9)

Teachers are asked how they feel when they have to differentiate instructions in their classroom to get opinions on self efficacy beliefs of early childhood teachers on the concept. Related with the issue, teachers who expressed their feelings in positive ways (n=3) stated happiness and excited about having a gifted children in their classroom. Analysis of the data revealed that teachers mostly stated feelings with negative statements (n=12). These statements display their feelings with reasons. Teachers stated that they feel panic, incompetence, worries, anxiety, tension, greater responsibility since they lack knowledge and competence regarding what to do with young gifted children in their classroom.

" I would think about what to do and feel nervous about how to deal with the children" ("ne yapmam gerektiğini düşünürüm tedirgin olurum onunla nasıl başa çıkacağım konusunda…") (T_2)

" I would nervous about having any negative effects on the child and question whether I was enough to full fill his/her needs"("tedirgin olurdum, olumsuz etkim olur mu acaba çocuğun üzerinde ona yetebilecek miyim diye düşünürüm..") (T_{15})

"I would feel responsible, this not a cause of happiness for teacher this means extra work, something different must be done for the children" (".. sorumluluk hissederim bu öğretmene mutluluk verici bir şey değil ek iş demek, bu çocuk için farklı bir şeyler yapılmalı..")(T_3)

4.4.2. What are the needs of teachers to meet the diverse needs of young gifted children?

Teachers are asked about their needs to serve gifted children in their classrooms; the self-reported needs of early childhood teachers are categorized under six different themes;

Gaining aware of characteristics of gifted children (n=7)

Professional development in gifted education (n=15)

Multiple levels of support (n=9)

(*Material (n=5); communication with colleges (n=2); program (n=10)*

Time for collaboration, implementation and documentation (n=5)

Model practices (n=10)

Collaboration with parents (n=15)

Teachers stated their needs on various concepts, they are themed as above. Teachers who expressed their needs in terms of *gaining more knowledge on awareness of characteristics of gifted children* has announced (n=7);

> *"I need to know the characteristics of the student to know what to do when and where"(".. nerde neler yapmam gerektiğini bilmek için öğrencinin özelliklerini bilmem lazım, ...") (T_3)*

> *"..to identify students I would need knowledge, I would need to consult with counsellors or expert. I would have to learn what to do, I may read books.."(".. Öğrencileri tanımak için bilgi almam gerekir, rehber öğretmenler ya da psikolog ya da uzmanlarla görüşmem gerekir, neler yapmam gerektiğini öğrenmem gerekir, kitap okuyabilirim belki…") (T_1)*

> *"It would be better if I could receive introduction from an expert who could explain to me the developmental characteristics and social intelligence of the child" ("seminer alabileceği uzman biri olsa iyi olur, çocuğun gelişim özelliklerinin ve sosyal zekalarını anlatsın bana") (T_8)*

There were teachers who expressed *multiple levels and sources of support* as a need (n=9). These teachers mostly explained that they need differentiated curriculum with various aspects in classroom and they expecte to get that plan from the authorities rather than preparing it by themselves. They also expect communication with colleges for collaboration and materials. Teachers who put forward that they need support in terms of materials stated that (n=5).

> *"I would ask for additional resources from the management"("... yönetimden ek kaynak isterim..") (T_9)*

There were teachers who asked for support regarding collaboration between colleagues (n=2)

> *"I would expect support from other teachers at the school regarding flow of information and knowledge" ("okuldaki diğer öğretmenlerden bilgi akışı konusunda destek belirim ") (T_{14})*

Some expressed their needs as a program (n=4);

> *"I would have liked to prepare my plans with an expert"(".. sınıf içi etkinliklerimi bir uzman ile hazırlamak isterim...") (T_{10})*
>
> *"I would expect a plan for instruction from school management" (" ...Okul yönetiminden plan beklerim..") (T_{12})*

Every teacher stated their expectation of support from the parents in terms of collaboration (n=15). They stated that they expected parents to be in contact with them and follow the pace of instructions which are given in the school.

Another theme emerging from structuring the codes is related with *time* for collaboration, implementations of differentiated curriculum and documentation (n=5);

Teachers clearly stated that;

> *"In a school where time is a big concern, working with a gifted child would be difficult" (".. zaman temposunun ağır olduğu bir okulda üstün zekalı çocuk ile çalışmak çok zor olacaktır..") (T_2)*
>
> "*Considering that the curriculum (for gifted children) must be more in-depth and comprehensive, I would need time to prepare and apply the curriculum."(".. ders müfredatımın daha derin ve geniş olması gerektiğini düşünürsek, bu planı hazırlamak için zamana, uygulamak için zaman ihtiyacım var…") (T_3)*
>
> *"There is the curriculum that must be followed, to meet the needs of other children, then there are things that need to be done for the gifted child. If the management does not show flexibility regarding time, it would be a difficulty"(" bir taraftan diğer çocukların ihtiyaçları işlenmesi gereken müfredat diğer taraftan da üstün zekalı çocuk için yapılması gerekenler eğer yönetim zaman esnekliği göstermez ise bu bir zorluk olabilir..") (T_{13})*

Need of *professional development* in gifted education is shaped by their stated needs on programming and application practices of that program for different needs of gifted children (n=15).All teachers stated that they were in need of professional development in the area. Teachers who look for how to learn to make a plan for gifted children with appropriate training expressed that;

> *"The curriculum for normally developed children is there in the class and being. But how can we apply this plan with a gifted child.."(" diğer öğrenciler genel bir planın varlığı sınıflarda var izleniyor peki ya bu program devam ettirerek üstün zekalı çocuğa ne gibi etkinlikler uygulamalıyız.") (T_4)*
>
> *"I believe that the role of teachers is guiding, I would like to have a training for how to instruct my lesson in the class and which points I need to pay attention to" (" sınıfın içinde dersi nasıl işleyeceğimi anlatan nelere dikkat etmem gerektiğini anlatan eğitim olsa, sonuçta öğretmenin rolü rehberlik..") (T_{11})*
>
> *"My role as the teacher is important for education of gifted children. I can not develop programs. I do not know how to do programming. If there is not a ready plan I would wish to learn programming" (". üstün çocukların eğitiminde benim rolüm büyük, plan yapama, bu konuyu bilmiyorum, eğer hep kullanılan bir program yoksa program yapmayı öğrenmek isterim") (T_{15})*

The last theme is created by analyzing the data about needs of teachers regarding the content of training which is expected by them. Teachers defined that they are in need of *model practices* rather than introduction to the concepts of gifted education.

Model practices stated by teachers (n=10) regard hands on practices and real life experiences. It is simply stated that only theory based information and a single instructional session as a training is not enough, teachers were looking for learning how to teach gifted children in harmony with different needs. They profess that they need to know how to differentiate instruction and curriculum in their classroom with provided models. Beside that, education should be given by accomplished instructors who have real experience in teaching gifted children.

4.5. Summary

The perception of early childhood teachers on young gifted children was examined within three aspects; perception on giftedness as a concept, perception on characteristics of young gifted children and perception on gifted education. The second purpose of the study is examining self-reported needs of early childhood teachers who are need to meet diverse needs of gifted children.

Revealed findings explain that definition of intelligence and giftedness has been shaped in connect on to what teachers think on the concept of giftedness and intelligence. The results indicate three different perception modes. However, the knowledge and the awareness level of early childhood teachers are asked to get in depth information about perception of teachers' regarding characteristics of gifted young children. Results indicated that the findings on perception of characteristics of gifted children have common points with relevant findings on giftedness. All these are also shape the perception on educational practices to meet diverse needs of young gifted children in their classroom. The findings revealed the commonalities between the perception of giftedness and gifted characteristics and gifted education. Self reported needs of teachers give opportunity to claim that systematic, comprehensive

and ongoing professional development is the step to contribute to gifted children reaches their full potentials.

CHAPTER V

DISCUSSION and CONCLUSION

The study is conducted with the aim of reaching early childhood teachers' perception on young gifted children. The perception regarding young gifted children is examined with three components; perception on giftedness as a concept, perception on characteristics of young gifted children and perception on gifted education. The second purpose of the study is examining self-reported needs of early childhood teachers who are responsible for ensuring multi-aspect development of young gifted children in their classrooms.

The analysis of the findings of the study revealed some illuminating points regarding early childhood teachers' perception on young gifted children. The first and most striking of these points is related to how early childhood teachers perceive giftedness as a concept. The responses of participants about their perception of giftedness conform to three models of intelligence in the literature. These are the cognitive, biological and domain-specific models.

The majority of participants gave answers in line with the cognitive model. According to this model, giftedness is a cognitive phenomenon which can be defined as excellence in one or more functions of the brain. When they were asked to define giftedness, they stressed excellence in cognitive functions of the brain as the practical definition of giftedness. Again in line with the cognitive model, when they were asked to list the characteristics of gifted children or to voice their agreement/disagreement with certain statements about gifted children, they again emphasized cognitive abilities most as gifted characteristics and agreed with statements affirming cognitive abilities.

Teachers' inclination to see outstanding performance in cognitive areas such as rapid learning, high capacity to process information, excellent memory, etc. as

main characteristics of gifted children entails two important implications. The first is that they tend to overlook giftedness which may manifest itself in other areas of human endeavor such as arts and sports. The second implication is that they define their teaching approach and strategies towards gifted children by mainly employing individualized studies for gifted children that aim at improving those outstanding cognitive capabilities alone.

A smaller group of participants perceive giftedness along the lines of the biological model which suggests that giftedness is a biological potential. In contrast to the cognitive or the domain-specific model which identify giftedness in its outstanding manifestations, the biological model defends that giftedness is an innate feature that must be nurtured through favorable environmental conditions to manifest itself and may stay dormant in the lack of those conditions.

The smallest group of participants perceives giftedness in accordance with the domain-specific model that acknowledges different types of intelligence rather than emphasizing cognitive brain functions. These teachers tended to see gifted children where they encountered noticeably advanced performances in a multitude of areas such as academic fields, arts, sports, etc.

However, regardless of the model they were grouped under, none of the participants could come up with a more sophisticated approach than individualized studies to education strategies for gifted children. The participants clearly displayed a lack of information about various types of instruction differentiation such as enrichment or acceleration which are suggested for gifted education in the literature.

Regarding the second purpose of the study which was examining self-reported needs of early childhood teachers, participants' responses were uniform in expressing negativity and deficiencies. All participants professed anxiety and doubtfulness when they were inquired about how they would feel if there were a potentially/certified gifted child in their class. They displayed a low self-efficacy belief when they were asked about their ability to competently fulfill the needs of young gifted children.

The following questions aimed at bringing out the self-reported needs of the participants. Again, they uniformly expressed their need for professional training regarding the education of gifted children. An overwhelming majority of them expressed their need to have more knowledge about the characteristics of gifted children in order to be able to identify them accurately. However, the majority of participants stated that knowledge and training alone would not be enough for the teacher to serve gifted children adequately but rather that they need multi-level support in terms of programming, resources, materials, management, etc. An interesting element the majority of participants made a point of is that they expressed their need for flexibility on time management since they speculate that they would require extra time to dedicate to the needs of the gifted child while still being responsible for managing regular classroom activities for the rest of the children.

Below, the findings which are compressed above in a concise manner are presented and discussed in detail together with relevant findings in the literature. Applications based on these findings and recommendations are elicited.

5.1 Early Childhood Teachers' Perception on the Concept of Giftedness

Giftedness has been used as a term synonymously with intelligence. The answer of the questions that is how people become intelligent or gifted is the way of forming educational practices. Teachers hold the idea that dynamic interaction between the innate ability and continuous interaction with the environment is determining for the development of giftedness or intelligence, teachers would be aware of their own value (Clark, 2008, p. 48). Participants of the current study display their perception to hold the dynamic interaction between innate ability and continuous interaction with the environment.

Early childhood teachers' perception on the concept of giftedness is investigated with two different sub-questions. First question aims to put out teachers' ideas on definition of intelligence. The second question is aimed at finding out

teachers' ideas on definition of giftedness. Results revealed that early childhood teachers' perceptions can be divided into three groups.

The first and most crowded group of participants revealed their perception mode by defining intelligence according to cognitive model and defining giftedness as excellence on cognitive abilities. According to cognitive model, intelligence is considered mostly as a brain capacity to function. Those functions are expressed in the literature as information processing, problem solving strategies, memory (Sternberg, 2005). Defining giftedness as excellence means that early childhood teachers consider giftedness as excellence in one or more human endeavor. The excellence is considered when it is observable with excellence in brain functions and means to be one or more steps further than their age mates. While teachers mostly weighted the cognitive model to define intelligence, they defined giftedness as excellence in one or more areas.

Teachers who valued cognitive abilities and define giftedness as excellence perceive giftedness as a concept which is achievement oriented and perceive giftedness as something that is visible with achievement and success on special abilities. Those teachers also tend to consider giftedness as an outcome of exercise in large. This group of perception suggests educational practices aiming to improve abilities, especially cognitive abilities, of young gifted children.

The second perception mode is defining intelligence related with biological model and defining giftedness as potential. Biological model regarding the definition of intelligence refers to it as inborn genius that is given and the environment has the power to shape it. This model definition is derived from the knowledge that gifted children have inborn potentials and environment should bring out the inborn potential. At this juncture, teachers who define the concept of giftedness as potential, consider gifted children as those who have the potential to be successful. This perception group suggests that giftedness is an inborn ability and potential and shaped by the environment.

Teachers who perceived giftedness as potential and defined intelligence with the biological model tend to value giftedness as it is observable within education

practices. Education practices aim practicing to increase the intellectual performance of gifted children.

The third perception mode on giftedness comes from the definition of intelligence in accordance with the specific domain model and definition of giftedness concept as noticeable abilities. Domain specific model refers to the teachers who explain intelligence by considering multiple intelligences theory and they believe that intelligence is determined biologically and stress the intelligence observed on talents like mathematics, music, sports. Teachers who define intelligence with domain specific model prefer the term "noticeable" to define giftedness. "Noticeable" refers to that extraordinary performance that can be seen on talent domains.

Teachers who perceive giftedness as noticeable and domain specific are expected to shape their educational practices to develop the child's interest. Gardner (1999) suggested that teachers who believe domain specific model establish a child-centered curriculum. They think that the aim of teaching gifted children is to enable children the using their particular exceptionalities and to make their exceptionalities noticeable on socially valuable roles.

The perception of teachers on giftedness is influential on educational aims and actions as it is stated in the literature. Regarding the first perception mode, teachers value giftedness as a cognitive ability and predict the future success with excellence (Winner, 1996). Educating children with the perception of excellence and considering cognitive abilities may disregard psychosocial aspect of giftedness and importance of social relations (Cigman, 2006). According to second perception mode, teachers perceive giftedness as a potential that is biologically rooted and socially drawn, educational actions will be in line with the success definition of society which may lead to overlooked specific talents of gifted children (Betts and Neihart, 1988). The third perception mode revealed giftedness as noticeable specific talent and apply instruction to provide optimal development of specific talent (Gardner, 1999).

The results of this study show that early childhood teachers mostly stressed the excellence value of giftedness regarding the cognitive model of intelligence. It is illustrated that early childhood teachers put more value on cognitive development of gifted children rather than their specific abilities. Therefore, as findings on teachers' perception stress that education practices are aimed at enhancing the skills and abilities of gifted young children by focusing goal directed teaching activities. However, the possibility of overlooking affective domain of development while focusing on excellence in cognitive abilities should be paid attention.

When demographic information regarding teachers' experience and whether they participated at seminar and workshops is examined, no consistent relation to their perception could be found.

Consideration of the findings regarding definition of intelligence and giftedness illustrate the confusion between the concepts of gifted and talented. This confusion is an important factor on the perception of giftedness. While participants were defining giftedness with children who are excellent in one or more area, have the potential to succeed in an area, and noticeable on exceptional abilities, they sometimes used the term "talented" as the synonym of "gifted". These two terms do not have the same meaning. They are hand in hand concepts, but different that each is based on being capable and relate to the quality of performance.

Gagne (1985, 1995) set a frame to distinguish giftedness and talent. Talent is seen with performance while giftedness is considered as potential, ability and competence. Roger (2001) stated the differences between talented and gifted behaviors that giftedness is evaluated as potential while talent is put out as performance.

To clarify the issue the examples are represented. Gifted behaviors are defined as potential whereas talented behaviors are performance. *Intellectual giftedness* is defined as capacity of high level of abstract thinking. *Intellectually talented* is someone who can use problem solving abilities higher than others. Someone who has *specific academic ability* has the capacity to show extraordinary level of functioning in specific are like mathematic. If someone has a s*pecific*

academic talent he/she shows well performance beyond their grade at all stages of their lives. *Visual and performing ability* refers to the potential of someone to be a writer, artist or musician but has not realized it yet. *Visual and performing talent* is producing or performing at a proficient level in the specific area or art. *Leadership ability* is seen as the potential to be leader and understand others. *Leadership talent* is taken into consideration when someone takes the project in hand and runs the organization effectively. *Creativity* is seen as capacity to think divergently either in general or in very specific areas. *Creative productive talent* means producing unique, original solutions that are used mostly in areas of software, art or advertisements.

Another point on teachers' confusion on terms "gifted and talented" appeared in the study. Some of the participants appraised "talented" not only as a synonym of "gifted" but also use term of "talented" only by considering it as having superiority in an area of sports, music or art. However, "talented" could be a performance on mathematics as well, it does not have to be performed in arts. Teachers apparently need more clarification on the concepts of giftedness and talented, otherwise misidentification of exceptionality of children can lead inappropriate strategies to use.

The stated findings about the confusion of teachers on the terms of "gifted and talented" are sign of lack of complete understanding of giftedness. Therefore, it is suggested that early childhood teachers are in need of clarification of terms with training or provided documents in their teacher training years or in- service training in their working place.

5.2. Early Childhood Teachers' Perception on Characteristic of Young Gifted Children

Findings regarding perception on the characteristics of young gifted children are in the same fashion with the perception of giftedness. As it is stated above early childhood teachers mostly perceive giftedness as excellence in cognitive abilities. Notwithstanding, early childhood teachers stated more cognitive characteristics of

gifted young children while defining the image of gifted children in their mind. These findings signify the fact that there is an organic and mutual interaction between teachers' knowledge and perception on giftedness. Mostly stated characteristics of gifted children rely heavily on cognitive abilities and excellence in the cognitive area is supportive for the result that is elicited as a result that teachers perceive giftedness through one dimension, high performance and excellence in cognitive skills.

Participants portrayed the characteristics of young gifted children by pointing six different ability areas; cognitive, social emotional, creative, psychomotor, leadership and specific academic abilities. Those are in line with the literature (Clark, 2002; Roger, 1986). Cognitive abilities of gifted children are uttered; high capacity to process information, rapid learning ability, strong curiosity, asking questions, being a keen observer and alertness are stated. However, high verbal abilities, early reading and reasoning abilities, abilities to make logical associations are not addressed.

Participants stressed thinking differently and being creative as abilities of creativity. Even the stated features show that teachers are aware that creativity is a valuable characteristic of giftedness; they do not illustrate some other abilities related with creativity; generating original ideas, having a vivid imagination and fantasies, offering unusual unique answers or solutions, sense of humor, being adventurist and speculative. These characteristics may not be stated since they are in line with destructive behaviors in the classroom. Unstated features of gifted children in the area of creativity are mostly seen as hard to handle characteristics in regular classrooms.

Participants defined gifted children who are active. In the literature being active would be coherent with having high degree of energy (Whitmore, 1980). However, active is stated as being impulsive rather than energetic in the study. It resulted since participants define impulsive behaviors while saying active rather than defining a positive characteristic like having a high degree of energy.

Specific academic abilities of gifted young children are less expressed as characteristics of gifted children who have long attention span, comprehension of the subject matter in advanced level, unusual interest, task commitment and excellent memory skills. This finding is also compatible with the findings on perception of giftedness. Fewer participants expressed the domain specific view on intelligence and noticeable features on the concept of giftedness. This finding suggests that knowledge deficiency of participants in the area since specific academic abilities of gifted children cannot be stated by common sense cognitive characteristics.

Leadership abilities of gifted children are addressed less but multiple descriptive abilities for leadership capacity of gifted children are uttered; self confident, responsible, ability to communicate with adults, having solutions to social problems. Since these abilities are stated less, early childhood teachers emphasize leadership ability less as a sign of giftedness.

Social-emotional characteristics are expressed with social vulnerability and high social abilities; motivated and easily bored. At this point, decision will be tough. Gifted children are seen as having both social abilities and social vulnerabilities. It would be seen as confusion. However it is more appropriate to evaluate controversy findings as being aware of the social emotional difficulties of gifted children. In the literature, Clark (2002) stated that gifted children have high emotional sensitivity; high level of justice and moral judgment, concerned with fairness, strong needs of consistency between values and personal actions. These emotional sensitivities trouble children when they are not intervened properly. According to Panov (2002), if the environment lacks harmony with their social emotional characteristics, leads children to have emotional instability in the classroom. However, since teachers do not specifically underline the probable emotional status of gifted children, it is appropriate to defend that teachers are aware of the differences of gifted children in the affective domain. In this context, little effort to inform teachers would be satisfactory to understand social emotional development of gifted children.

“Motivated” and “easily bored” terms are used to describe gifted children regarding social development by participants. These characteristics are context

based. If the child has challenging offers of deeper understanding of a concept he/she will show motivated behaviors, on the contrary situation the gifted child will show signs of boredom. Utterance of both can be interpreted with an optimistic approach and stated that teachers are aware of the relative signs of giftedness regarding social emotional domain of development of gifted children.

To get more clear ideas on perception of early childhood teachers on characteristics of young gifted children, their specific characteristics is uttered to see weather participants agree, disagree or not decided on stated characteristic of young gifted children. Related findings were used to investigate awareness of early childhood teachers on characteristic of young gifted children.

All participants stated their agreement on those young gifted children having high cognitive abilities. According to findings all teachers expressed their agreement on the utterance that are gifted children show varied interest and exhibit curiosity, learn quickly and show precocity, comprehend and synthesize problems, display reasoning ability and have extensive interest on adult issues.

However, on demonstration of high level of verbal abilities, comprehension abstract subject matters, excellent memory skills, disagreements are illustrated by participants. This is because those skills belong to specific academic categories of characteristics (Ataman, 2002), and indicate deficiency of knowledge of early childhood teachers.

Perfectionism is considered as a characteristic of gifted children. However, nearly half of the participants stated that it is not a relevant characteristic, but it has a place in the literature that children can see the perfect result in their mind and expect to reach that perfect result which is not possible with their hands. (Baum and Olenchak 2002).

Teachers are also asked whether creativity is a characteristic of gifted children or not. The findings related to frequency show that more than half of the participants agree with the idea that giftedness and creativity are complementary for each other. Research on creativity enounces that creativity involves giftedness. Baer

(1997), for example, states that a product, idea or behavior must be something new, different or unique to be considered creative.

Most of participants stated that constant success cannot be a characteristic of gifted young children and they may fail as well. This is supported by the literature that gifted children are not always successful, emotional instabilities result in underachievement or inappropriate environment causes them to let down (Panow, 2002). These findings can be interpreted that teachers are aware of the importance of their roles to create the appropriate environment for gifted children to enhance their development. It was expected that if teachers believe that environment can lead success, they should believe that environment can lead to adaptation problems as well. This expectancy is met by results related with possible characteristic behaviors of gifted children that following rules is not easy for gifted children. More than half of participants stated their consensus.

Even participant who agreed that cognitive abilities of gifted children are higher, do not think that early reading skills are a characteristic of giftedness. However, it is the most obvious characteristics of gifted children stated in the literature (Gross, 1992; Clark, 2002). Instead, teachers stated that early reading may be the result of parental efforts rather than learning by the children on their own. Regarding the explanation of teachers, I suggest that participants are teachers of 5 and 6 year old group, at which age reading skill as are quite common and do not indicate extraordinary abilities. In addition, teachers did not differentiate between early reading and meaningful reading; early reader gifted children can also grasp with adequate comprehension. While the idea reading about subject matters like nuclear energy or nanotechnology.

While participants expressed their ideas on the characteristic of having long attention span, fewer teachers agreed with it as a characteristic since they believe that attention span characteristic is context based. Even if it is a characteristic of young gifted children (Roger, 1985), it is context based. However, attention span should be considered a characteristic of giftedness since it actually means that gifted children can show persistency on finishing the task, and their attention span is longer than

their age mates on the same task as long as the task is challenging for their development level.

When the results of early childhood teachers' perception on characteristics of gifted children are taken into account, the consistency between the findings of early childhood teachers' perception on giftedness and characteristics of gifted children appears. Most of the teachers stated their perception on young gifted children as having excellence in cognitive abilities while they emphasis the cognitive characteristics of young gifted children. It is considered as result that characteristics of gifted children are expressed mostly on cognitive domain, since the teachers' perceptions on giftedness is determined with excellence regarding cognitive functions of the brain.

Most of the teachers defined gifted children according to their cognitive characteristics regardless of their teaching experience, the workshops and seminars they received and the level of their education. According to the demographic information of the teachers, the only commonality is that they all took a course regarding special education at the university level. This course is the only common source providing them all with information regarding the characteristics of gifted children. It could be concluded that either the course provided information on gifted children solely regarding their cognitive characteristics or the course failed to adequately provide information on other characteristics of gifted children.

A study was conducted in Turkey in 2009 with the aim of determining the awareness of teachers of the characteristics of gifted children. It claimed that preschool teachers do not have enough academic information about characteristics of gifted young children. This finding was established with assessments of awareness levels of teachers on the characteristics of gifted children. The study suggested that since the awareness level of teachers are not high; they are not able to distinguish gifted and successful students. It is advised that teachers should have in-service training about gifted children and practice extensively to reinforce their theoretical information. Moreover, school administrators and teachers should also be trained

about how gifted children's different characteristics should handle in classroom environment (Demir, İnan, Bayındır, 2009).

5.3. Early Childhood Teachers' Perception on Gifted Education

Early childhood teachers were questioned about their ideas on gifted education. The questions were inquired with deductive method. First question was about ideas on gifted education in Turkey. The answers of the questions were focused on the idea that education system has no room for gifted children. Subsequently, the teachers were asked which educational models are necessary to create room for gifted children in the system. They stated two different models; specialized classes and pull-out practices. Closely, participants' ideas on what could be their practices to meet needs of gifted children without a prepared specialized model in their classroom are inquired. The findings of questions are put in a wide interpretation on perception of early childhood teachers' on gifted education.

As participants point that there is no room for gifted children in education system, none of participants stated any hope about education facilities for gifted children in Turkey. With an optimistic view, most participants are aware of the fact that gifted children have different needs, so they deserve special classes or schools to develop their abilities. They also stated another fact regarding teacher training on gifted education is the lack of educated teachers or experts on gifted education in schools. While they were focusing on the deficiencies of educational facilities, they stated another complication in education of gifted children. It is inappropriate educational environment due to deficiencies in teachers' abilities, knowledge and teaching facilities.

Their ideas represent the fact that, when the education system in Turkey is scanned, it is difficult to see practices aimed at gifted education except Science and Art Centers (BİLSEM) which are in need of revision (Grand National Assembly of Turkey, Parliamentary Inquiry Committee, 2012). Insufficient, teacher training is also figured out by participants' answers to the question if they had any course in their teacher training practices. It seems that in the field of early childhood education,

all teachers took a course called “special education”. Even there information about gifted children was obtained; it is expressed that teachers could not see any practical impact on their teaching.

Participants stated that their preferred education model for gifted children is mostly specialized classes in which children separated from their age groups study with their same ability groups. Secondly, pull out programs are described as appropriate for gifted children by participants. Children are taken away their classes to be with their same ability or interest groups to work. Pull out program was considered as a facility to meet diverse needs of gifted children. However, both education models may signify that teachers are moving away the responsibility of meeting diverse needs of gifted children in their classroom. Some teachers see having gifted children in their classroom as difficult as having a child who has mental retardation. Regardless of what could be the unconscious pushes of participants define education models, their ideas exemplify the controversy issue; whether heterogonous or homogenous classrooms should be furnished for gifted children.

In Turkey, if there is any specialized application for gifted children in schools, each child must have a report from an expert certifying their giftedness for enrolment. Mostly weighted identification process in Turkey is standardized tests which can only be applied to children in elementary years legally due to reliability concerns of tests (Bilmen, 2011). That is illustrates the fact that early childhood teachers are the only people who are responsible for enhancing the development of children. In preschool as it is stated by Bishop (1968) teachers do play an important role in the prevention of bad study habits, social behavior and self-esteem problems, disinterest, underachievement and boredom by this group. Preschool gifted children require teachers who provide learning opportunities-intellectual, social and personal- which facilitate positive school life adaptations.

Participants stated their ideas on how they would provide opportunity for young gifted children in their classroom to realize their full potentials. Participants’ expressions are in line with what Cline (1998) suggests. Curricular modification for

high-ability preschoolers is necessary. Modification is achieved by enriching multidisciplinary units of instruction, providing depth and breadth to learning, providing specific instruction in research skills and providing teaching strategies such as creative problem solving and divergent thinking. Beside that, developmentally appropriate practices for the gifted preschooler must address both the asynchronous development as well as the child's emerging skills. While meeting the child's advanced thought processes, sensitivity also take place in any circumstance of limitations in social, emotional, or physical domains (Cukierkorn et al., 2007).

The suggested applications are gathered under differentiation (Kaplan, 1994) which is seen more applicable for addressing the needs of gifted children in preschool. Differentiation has four sub-applications: acceleration, enrichment concept, teaching skills and individual studies. Acceleration is maintaining activities which are above the grade or ability level of gifted children. Enrichment concept means providing more deep and complex knowledge than gifted children need. Teaching skills activities point on products, related to one specific skill. Individual studies are the most frequently preferred implication of participants when they have gifted children in their classroom.

Participants' ideas on differentiation are frequently relevant to individual studies. In order to facilitate the delivery of content, individualized instruction is preferred as a way of differentiation by teachers. It means participants are expected to guide the design of a program based on student-centered learning; encouragement of student independence; an open, accepting environment (Snowden, 1995). Individualized instruction should provide activities that enhance cognitive abilities and higher order thinking skills such as analysis, synthesis, and evaluation (Kitano, 1982).

However, participant definitions on individual studies were heavily relying on having extra working time with children apart from other teaching activities. It is not considered as a differentiation rather than it is a specific strategy to enhance abilities of gifted children. In this case, it is more difficult and time consuming both for

children and teachers involved in individual studies. At this stage, the finding is important to intervene due to the consistency between early childhood teachers' perception on giftedness, characteristics of gifted children and gifted education. More participants illustrated their perception on giftedness as excellence in cognitive functioning, gifted children characteristics mostly were defined on cognitive area and preferred education technique is individual studies which is excluding children from the class since they have higher abilities in cognitive areas. To meet the needs of gifted children participants mostly stated to use of individual studies with gifted children with the aim of enhancing their cognitive abilities. This finding is interpreted as teachers' perception on education of young gifted children is mostly figuring out their excellence in cognitive abilities and practice to improve those abilities with individualized studies.

5.4. Teachers' Self Reported Needs on Meeting Needs of Gifted Children

Early childhood teachers' needs to do requirements of different abilities of gifted children are investigated; before the needs are addressed early childhood teachers self efficacy beliefs are examined. By considering the findings of the study on early childhood teachers' perception on gifted education, suggested that they do not have a complete view of meeting the needs of gifted children in the classroom. This view supported the relevant findings on self efficacy believes of early childhood teachers related with identifying and educating gifted children. Nearly all participants stressed that they did not feel competent to identify and educate gifted children. Therefore, it is appropriate to claim that the educational practices of teachers expressed are the result of their lack of confidence and knowledge on working with gifted children. This discussion point has place in Meyers (1984) research and it is detected that classroom teachers reported needs for more specific knowledge related to educating the gifted. Teachers felt pressure to make modifications in their teaching to accommodate the needs of gifted students, yet they felt they lacked sufficient knowledge about instructional strategies to be able to do more. Altough Özder (2011) found out that the self-efficacy belief on novice teachers are at a sufficient level, in

the present study most of the teachers expressed low self-efficacy beliefs regardless of the teaching experience. Camadan (2012) pointed to teachers more knowledgeable on the concept having higher self-efficacy beliefs. The findings of the present study indicated a controversy in that nearly all the teachers expressed low self-efficacy beliefs although all of them had at least a course and some of them even had received seminars related with giftedness throughout their education and their work experience. This controversy could be the result of the fact that the course and trainings teachers receive are not sufficient to make them feel competent in the area of gifted education.

On count of low self efficacy beliefs of early childhood teachers on identifying and educating young gifted children in their classroom, their self reported needs are ascertained. Findings are parallel to findings in the literature. Whitmore (1986) stated that young gifted children have traditionally been underrepresented in both gifted education and early childhood education. Teachers or supervisors who work with gifted children are not trained and prepared for the learning needs of gifted children. Preschool teachers are rarely providing appropriate educational intervention for young gifted children.

Professional development and specific training need of participants were reported as a weighted need. The participants describe the training or education that they were in need based on two components. One of reported needs is training related with characteristics of gifted young children. When the characteristics of gifted young children are acquired by the teachers they reported that they feel more competent to identify gifted children and design strategies to use in the classroom. Moreover, inadequate knowledge on characteristics of gifted children is a barrier before implementing strategies and even recognizing differences in their development to identify them.

The second need is reported as attending professional development trainings regarding the education of gifted children. The self efficacy believes of teachers indicate a lack of confidence due to insufficient knowledge. In harmony with literature, Hansen and Feldhusen (1994) found that teachers who had education on

gifted education were significantly more effective in instruction and in creating more positive classroom environment than those teachers with no specialized course work.

On the other hand when participants indicated their concerns on specialized trainings and professional development services, they delineated that programs offer only theoretical knowledge and no opportunities to practice. Teachers are in need of training which gives opportunity to see gifted children, hold practices with gifted children and experiences share with an experts on the area. That is called as model training in the study.

Besides that, after attending professional development trainings, transfer of what was learned into practice is not ensured. To overcome this difficulty, participants figured out multiple levels of support. In order to overcome difficulty of delivering instructional knowledge to integrate into the curriculum and to develop teachers' skills they should go through a process of learning, while receiving feedback from more experienced colleagues or supervisors (Darling-Hammond & Baratz-Snowden, 2007). Teachers cannot be expected to become expert in the area after attending a workshop without support. Diverse instructional strategies can be learned after attending professional development trainings; however, practices can be improved with support of schools. As participants expressed they need support at the schools with materials, resources and collaboration with colleges.

Time for collaboration and communication with colleagues, time for planning and implementation of learned concepts were stressed as needs by participants. They mostly declared that schools are demanding that pre-prepared curriculums for normally developed children are followed. Instruction according to that curriculum covers all the time teachers have in school. In this situation application of differentiated curriculum is nearly seen as impossible due to time pressure. Therefore, teachers are in expectation of flexibility in classroom activities from the school management.

These findings are in line with another study which enounced that to serve gifted children teachers are in need of long run or snap shot support whenever teachers encounter gifted young children. The support demand of teachers could be

met by the administration. Teachers are in need of resources for information about development of gifted children and types of educational resources. When they find resources they need time to utilize those resources to assist young gifted children. Since young gifted children are instructed with differentiated instruction, teachers could work cooperatively work with vertical and horizontal teams of educators. (VanTassel-Baska & Little, 2003).

5.5. Conclusion

In the light of examination of the findings, perception of early childhood teachers on gifted young children is revealed. The perception of early childhood teachers on young gifted children is examined by investigating perception of teachers regarding three aspects; perception on giftedness, characteristics of gifted children and education of gifted children. Early childhood teachers structured their perception of gifted young children from the perspective cognitive development. Teachers' perception of three aspects shows consistency. Giftedness is defined as a concept based on excellence in cognitive abilities of gifted children. Subsequently, cognitive characteristics which indicate high abilities in cognitive function like rapid learning are stated most to define gifted characteristics. Related with that, early childhood teachers' self reported practices consist mainly of individual studies which define as working with children to support high abilities.

Gifted children are high in their cognitive abilities that construct perception of early childhood teachers. However, gifted children capable of high performance include those with demonstrated achievement and/ or potential ability in any of the following areas, singly or in combination: general intellectual ability; specific academic aptitude; creative or productive thinking; leadership ability; visual and performing arts; psychomotor ability (Jolly, 2009). Therefore, early childhood teachers need expanded knowledge expose about the concept with in-service training or training from different sources.

There are leaking points on how early childhood teachers offer educational needs of gifted children and put them in risk for inappropriate learning environment. Main reasons of these leaking points are illustrated by teachers with their answers

regarding what they need to become important actors of gifted education. Early childhood teachers categorize their needs on professional development and trainings with model practices. To deliver learned concepts into practice, they express need for support in terms of time, material, resources, communication, collaboration and supervision.

5.6. Implications

The findings of the study contribute to the literature while examining early childhood teachers' perception on young gifted children. In coherence with the perception of giftedness, defined characteristics of giftedness and educational practices are expressed. Teachers' perception regarding young gifted children is structured on cognitive model which defends that gifted children are high in their cognitive abilities. Therefore educational practices are in the same line to support children on their cognitive abilities for academic achievement. This may destroy the whole picture of gifted children who have diverse needs. Only one aspect of their needs will be met in this situation. Teachers need to know different abilities of gifted children in different ability areas like creativity, visual art performance, leadership abilities. If the perception of teachers is enlarged with provided knowledge, more children will profit. This perception is considered incomplete, therefore in-service training to teachers on the concept to grasp the whole possibilities of giftedness is suggested so that diverse needs of young gifted children can be understood.

Moreover, several participants of this study did not show any awareness on the way of meeting diverse needs of gifted children by programming differentiation or curriculum modification strategies. Therefore the implication of findings should be a program for teacher training which focuses on curriculum modification with multiple ability groups. The ways of differentiation also should be a part of the program. Differentiation can help children who are not gifted.

The findings of the study may indicate the shortcomings of early childhood teacher training regarding identification and education of gifted young children in

preschool. Collins (2011) found out that undergraduate students generally take one or two courses regarding gifted education throughout teacher training and these courses fail to sufficiently prepare the prospective teachers for reliable identification and effective education of gifted children. Carrington & Bailey (2000) came up with recommendations on focusing more on gifted education strategies in teacher education programs in addition to specific courses on gifted education.

The findings of the study also put forward implications which are necessary to be provided to teachers to reach and meet the needs of gifted young children. These implications are assigned to school management like maintaining in-service trainings for teachers, supply resource, facilitate collaboration with colleagues, and provide flexibility regarding time and classroom practices of teachers. Also school managements need experts to support and collaborate with teachers while working with gifted children. Serving teachers would benefit from in-service training regarding the characteristics, identification and need of gifted children. Training aimed at increasing skills and improving confidence of teachers regarding their ability to support gifted children should also incorporate research findings contradicting stereotypes and misconceptions to help teachers grow aware of and overcome their own misunderstandings (Collins, 2011). The awareness regarding how skills for gifted education can also be used to serve all children better may help reduce resentment (Collins, 2011). Opinions regarding gifted children and their education would also enable school managements to better monitor the attitudes and beliefs of their staff (Gagné, 1991). Training provided to individuals in order to address misconceptions may also help in improving teachers' attitudes towards the gifted and their education.

All suggestions are addressed at school a limited audience, i.e., school administration and teachers. However, gifted education is in need of formation in Turkey, without recognition of existence of gifted children and their different needs there would be no attempt to meet their needs. Education can make children either a source of success that are dedicated the country or loss of country. Therefore, the value of those gifted children should be expressed and taken into

part of consideration as education policies. Levent (2011) argues that too little has been done concretely and practically to address the essential needs of gifted students on a national level. According to him, officials responsible for assessing education policies must understand individual differences and comprehend that gifted children have the potential to become noteworthy and leading figures in various domains on a national and international level. Therefore, the first step in ensuring the development and contribution to society of gifted children is the formulation of sustainable and practical policies. There is a need for a legal framework in order to develop and implement policies regarding processes of identification, monitoring, education and employment of gifted children.

5.7. Recommendations for Further Studies

The study can be developed with a more representative sample. A diverse sample of early childhood teachers would develop a deeper view on the issue.

The same study can be reformulated and implemented with the aim of comparing the perceptions of teachers with and without the experience of having worked with gifted children.

Another study might be conducted to examine whether the self-efficacy beliefs of teachers regarding education of non-gifted children reflect their self-efficacy beliefs regarding gifted education.

Models for education aimed at meeting the needs of teachers can be designed and their effectiveness can be measured.

Whether preschool teachers possess the competency to identify gifted students is a research question on its own.

The present study couldn’t determine a consistent relationship between the demographic information of teachers and the results. Future studies can further investigate the relation between experience, education and the perception of teachers.

On the other hand, the study would be enlarged by changing the sample from teachers to gifted children with retrospective questions about their identification and education process. By doing this, from the view of gifted children about their diverse needs in education can be obtained. Interviewing gifted children regarding their experiences in education can shed light on possible ways to improve gifted children in Turkey.

REFERENCES

Adderholdt, M., & Goldberg, J. (1999). *Perfectionism: What's bad about being too good? Revised and updated edition.* Minneapolis: Free Spirit.

Akarsu, F. (2004). Üstün Zihinsel Yeteneklilerin Eğitiminde Sorunlar, *Üstün Yetenkli Çocuklar Seçilmiş Makaleler Kitabı.* İstanbul : Çocuk vakfı yayınları.

Akarsu, F. (1991). Enderun: The Palace School For The Gifted. *European Council for High Ability*, Netherlands.

Akarsu, F. (2000). İstanbul Bilim ve Sanat Merkezi (BİLSEM) İçin Bir Öğrenme Modeli. *Gifted and Talented İnternational, 15* (2), 124-129.

Akarsu, F. (2001). *Üstün Yetenekliler, Yetişemediğimiz Çocuklar: Üstün Yetenekli Çocuklar ve Sorunları*. Ankara: Eduser Yayınları.

Akkanat, H. (1999). Üstün veya Özel Yetenekliler. *Milli Eğitim Bakanlıgi Dergisi*, 103.

Akkanat, H. (2004). Üstün ve özel yetenekliler. *Türkiye Üstün Yetenekli Çocuklar Kongresi, Seçilmiş Makaleler*. İstanbul: Çocuk Vakfı Yayınları.

Akkutay, U. (2002). *Osmanlı Eğitim Sisteminde Enderun Mektebi, Osmanlı* Cilt 5. Ankara: Yeni Türkiye Yayınları.

Akkutay, Ü. (2004). Osmanlı Eğitim Sisteminde Enderun Mektebi. *Üstün Yetenekli Çocuklar Seçilmiş Makaleler*. İstanbul. Çocuk Vakfı Yayınları.

Al-Shabatat, A. M., Abbas, M., & Ismail, H. M. (2009). The Direct and Indirect Effects of Environmental Factors on Nurturing Intellectual Giftedness. *Internatıonal Journal of Special Education, 24* (3).

Ataman, A. (2003). *The Evaluation of Gifted and Talented Education in Turkey*. 2-6 Agustos, Istanbul, World Council for Gifted and Talented Chidren 13th Biennial World Conference.

Ataman, A. 2004. *Üstün zekalı/yetenekli çocuk ile yaşamak, üstün yetenekli çocuklar: Seçilmiş Makaleler Kitabı*, İstanbul: Çocuk Vakfı Yayınları.

Ataman, A. (1996). *Üstün Zekalı ve Üstün Özel Yetenekli Çocuklar, Eğitimimize Bakışlar*. In Fındıkçı, İ. (Ed), İstanbul: Kültür Koleji Eğitim Vakfı Yayınları.

Ataman, A. (2003). Üstün Zekalı/Yetenekli Çocuklar, *Özel Gereksinimli Çocuklar ve Özel Eğitime Giriş*. Ankara: Gündüz Eğitim ve Yayıncılık.

Ataman, A. (2000): Üstün Zekalılar ve Üstün Yetenekliler. In Eripek, S.(Ed). *Özel Eğitim İçinde, (151-170).* Eskişehir:Anadolu Üniversitesi Yayın.

Ashton, P. (1984). Teacher efficacy: A motivational paradigm for effective teacher education. *Journal of Teacher Education, 35*(5), 28-32.

Awanbor,D.(1991) Teachers and Their Gifted Children In The Classroom: A Perceptual Analysis. *Gifted Education International ,7*(2),82-84.

Bain, S. K., Bliss, S. L., Choate, S. M., & Brown, K. S. (2007). Serving children who are gifted: Perceptions of undergraduates planning to become teachers. *Journal for the Education of the Gifted, 30*(4), 450–478.

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory.* Upper Saddle River, N.J.: Prentice Hall, Inc.

Bangel, N. J., Enersen, D., Capobianco, B., & Moon, S. M. (2006). Professional development of preservice teachers: Teaching in the Super Saturday program. *Journal for the Education of the Gifted, 29*(3), 339-361.

Barbour, N. B. (1992). Early childhood gifted education: A collaborative perspective. *Journal for the Education of the Gifted, 15*(2), 145-162.

Baum, S., & Olenchak, F. (2002). The Alphabet Children: GT, ADHD and more. *Exceptionality, 10*(2), 77-91.

Begin, J., & Gagné, F. (1994). Predictors of a general attitude toward gifted education. *Journal for the Education of the Gifted, 17*, 74-86.

Bildiren, A., (2011). *Üstün Yetenekli Çocuklar*, İstanbul: Doğan Yayıncılık.

Bilgili, A. E. (2004). Bir Türk Eğitim Geleneği Olarak Enderun'un Yeniden İnşası. *I. Türkiye Üstün Yetenekli Çocuklar Kongresi.* İstanbul: Marmara Üniversitesi Atatürk Eğitim Fakültesi.

Bishop, W. (1968). Successful teachers of the gifted. *Exceptional Children*, *34*, 317.

Borland, J. H., & Wright, L. (1994). Identifying young, potentially gifted economically disadvantaged students. *Gifted Child Quarterly, 38(4),* 164–171.

Borland, J. H. (1989). *Rethinking gifted education.* London: Teachers Collage Press.

Bredekamp, S., & Copple, C. (Eds.). (1997). *Developmentally appropriate practice in childhood programs.* Washington, DC: National Association for the Education of Young Children.

Bulmer, M. & Solomos, J. (1999). Ethical and racial studies today. London:

Routledge.

Bruner, J., (1996). *The culture of education.* Cambridge: Harvard University Press.

Burns, J. M., Matthews, F. N., & Mason, A. (1990). Essential steps in screening and identifying preschool gifted children. *Gifted Child Quarterly, 34*(3), 102–107.

Cagla, G. (2010) Evaluations of Kindergarten Teachers in Turkey. *European Journal of Social Sciences, 16*(1), 43-52.

Çağlar, D. (1972). Üstün Zekâlı Çocukların Özellikleri, *Ankara Üniversitesi Eğitim Fakültesi Dergisi, 5* (3), 95-110.

Çağlar, D. (2004). Üstün Zekalı Çocukların Eğitim Modelleri, *I. Türkiye Üstün Yetenekli Çocuklar Kongresi Bildiriler Kitabı*. İstanbul: Çocuk Vakfı Yayınları.

Celkan, H. Y. (1991). *Eğitim Sosyolojisi*, Erzurum: Atatürk Üniversitesi Kazim Karabekir Eğitim Fakültesi Yayınları.

Cigman, R. (2006) 'The Gifted child: a conceptual enquiry', *Oxford Review of Education*, *32*(2).

Charlesworth, R., Hart, C.H., Burts, D.C., & Hernandez, S. (1991). Kindergarten teachers' beliefs and practices. *Early Child Development and Care, 70*, 17-35.

Charlesworth, R., Hart, C.H., Burts, D.C., Thomasson, R.H., Mosley, J., & Fleege, P.O. (1993). Measuring the developmental appropriateness of kindergarten teachers' beliefs and practices. *Early Childhood Research Quarterly, 8*, 255-276.

Clark, B. (2007). *Growing up Gifted : Developing the Potential of Children at Home and at School.* Prentice Hall.

Clark, B. (2002). *Growing up gifted: Developing the potential of children at home and at school* (6th ed.). Upper Saddle River, NJ: Merrill–Prentice Hall.

Cline, S. (1998). The Cline cube: Integrating models of gifted education. In J. F. Smutny (Ed.), *The young gifted child: Potential and promise, an anthology* Cresskill, NJ: Hampton Press.

Cohen, G. (2005). *The Mature Mind*, New York: Basic Books.

Cohen, L., Manison, L., & Morrison, K. (2007). *Research methods in education.* New York: Routledge.

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

Colangelo, N. (2002, Fall). Counseling gifted and talented students. The National Research Center on the Gifted and Talented Newsletter. Retrieved Agust, 18, 2012 from http://www.gifted.uconn.edu/nrcgt/newsletter/fall02/fall022.html.

Copenhaver, R. W., & McIntyre, D. J. (1992). Teachers' perception of gifted students. *Roeper Review, 14* (3), 151-153.

Creswell, J. W. (2007). *Qualitative inquiry and research design: Choosing among five approaches.* Thousand Oaks, CA: Sage.

Dağlıoğlu, H. E. (1995). *İlkokul 2.-5. Sınıflara Devam Eden Çocuklar Arasından Üstün Yetenekli Olanların Belirlenmesi.* Unpublished Master Thesis, Hacettepe Üniversitesi Sağlık Bilimleri Enstitüsü, Ankara.

Dağlıoğlu, H. E., Alemdar, M., Çalışkandemir, F. & Kangal, BB. S. (2010) Examination of Human Figure Drawings by Gifted and Normally Developed Children at Preschool Period. *Elementary Education Online, 9*(1), 31-43.

Darling-Hammond, L., & Baratz-Snowden, J. (2007). A Good Teacher in Every Classroom: Preparing the Highly Qualified Teachers Our Children Deserve. *Educational Horizons,* 111-132.

Dash, N. (2007). Evacuation decision making and behavior responses: Individual and household, *Natural Hazards Rev. 8*(3), 69–77.

Dauber, S.L, & Benbow, C.P. (1990).Aspects of personality and peer relations of extremely talented adolescents. *Gifted Child Quarterly, 34*(1), 10-14.

Davasligil, U., Zeana, M. (2004). Ustun Yeteneklilerin Egitimi Projesi. In Sirin, M. R., Kulaksizoglu, A., Bilgili, A. (Ed), *Ustun Yetenekli Cocuklar Secilmis Bildiriler Kitabi* (85- 101). Istanbul: Cocuk Vakfi Yayinlari.

Davaslıgil, Ü. (2004). Üstün Çocuklar, In Şirin, R., Kulaksızoğlu, A. & Bilgili, A. (Ed.) *Üstün Yetenekli Çocuklar Seçilmiş Makaleler Kitabı.* İstanbul: Çocuk Vakfı Yayınları.

Davaslıgil, Ü. (2004). Üstün Zekalı Çocukların Eğitimi, *Üstün Yetenekli Çocuklar Seçilmiş Makaleler Kitabı*. İstanbul: Çocuk Vakfı Yayınları.

Delisle, J. R. (1994). Dealing with the stereotype of underachievement. *Gifted Child Today, 17*(6), 20–21.

Demirbaş, M. (2009). Türkiye'deki Bilim ve Sanat Merkezlerinde Öğrenim Gören Üstün Yetenekli Öğrencilerin Bilim Adamı İmgeleri. *Journal of Qafqaz University, 28,* 197-207.

Dockett, S., Perry, B., Howard, P., Whitton, D., & Cusack, M. (2002). Australian Children Starting School. *Childhood education: Infancy through early Adolescence 78*(6), p. 349-353.

Donmez, N. B. (2004). Bilim Sanat Merkezleri'nin Kurulusu ve Yapilmasi Gereken Duzenlemeler. M. R. Sirin, A. Kulaksizoglu, A.E. Bilgili (der.). *1. Turkiye Ustun Yetenekliler Cocuklar Kongresi Bildiriler Kitabi*. (69–75). Istanbul: Cocuk Vakfi Yayınlari.

Dönmez, B. N. (2009). Üstün Ve Özel Yetenekli Çocuklar Ve Eğitimleri. In Ataman, A. (Ed) *Özel Gereksinimli Çocuklar ve Özel Eğitim,* (pp. 285- 305). Ankara: Gündüz Eğitim ve Yayın.

Dönmez, N. B. (2004). Bilim ve Sanat Merkezleri'nin Kuruluşu ve İsleyişinde Yapılması Gereken Düzenlemeler. *Üstün Yetenekli Çocuklar Bildiriler Kitabı*. İstanbul: Çocuk Vakfı Yayınları.

Dönmez, N. B. ve Kurt, Z. Ş. (2004). Bebeklik ve Okul Öncesi Dönemde Üstün Yetenekli Çocukların ve Ailelerinin Yönlendirilmesi. *I. Türkiye Üstün Yetenekli Çocuklar Kongresi*. İstanbul: Marmara Üniversitesi Atatürk Eğitim Fakültesi.

Edwards, S. (2005). Children's learning and developmental potential: Examining the theoretical informants of early childhood curricula from the educator's perspective. *Early Years, 25*(1), 67–80.

Elhoweris, H. (2008). Teacher judgment in identifying gifted/talented students. *Multicultural Education, 15* (3),1068-3844.

Enç, M. (2004). *Özel Eğitim Tarihçesi. Türkiye Üstün Yetenekli Çocuklar Kongresi, Seçilmiş Makaleler*. İstanbul: Çocuk Vakfı Yayınları.

Enç, M., Çağlar, D. ve Özsoy, Y. (1981). *Özel Eğitime Giriş.* Ankara: Ankara Üniversitesi Eğitim Fakültesi Yayınları.

Ergün, M. (1992). *Egitim ve Toplum: Egitim Sosyolojisine Giris,* (2nd. Ed). Ankara.

Erkal, M. (1992). *İktisadi Kalkinmanın Kültür Temelleri*. Istanbul

Ersoy, Ö. & Avcı, N. (2001). *Özel Gereksinimi Olan Çocuklar ve Eğitimleri: Özel Eğitim*. İstanbul: YA-PA Yayınları.

Feldhusen, J. (1982). Myth: Gifted education means having A programp Meeting the needs of gifted students through differentiated programming. *Gifted Child Quarterly, 26*(1), 37-41.

Feng, A. X., Van Tassel-Baska, J., Quek, C., Bai, W. & O'Neill, B. (2005) A Longitudinal Assessment of Gifted Students' Learning Using the Integrated Curriculum Model (ICM): Impacts and Perceptions of the William and Mary Language Arts and Science Curriculum. *Roeper Review*, 27(2).

Fiedler, E. D., Lange, R. E., & Winebrenner, S. (2002). In search of reality:

Unraveling the myths about tracking, ability grouping, and the gifted. *Roeper Review, 24*(3), 108–111.

Fraenkel, J. R. , & Wallen, N. E. (2006). *How to design and evaluate research in education.* New York: McGraw-Hill.

Freeman, J. (2005) 'Permission to be gifted: how conceptions of giftedness can change lives, in R. Sternberg & J. Davidson, Conceptions of Giftedness, Cambridge: Cambridge University Press.

Freeman, J. (1979) *Gifted Children: Their Identification and Development in a Social Context*. MTP Press, Lancaster ; University Park Press, Baltimore.

Gagne, F. (1985). Giftedness and talent: Reexamining a reexamination of the definition. *Gifted Child Quarterly,* 103-112.

Gagne, F. (1995). From giftedness to talent. A developmental model and its impact on the language of the field. *Roper Review,* 103-111.

Gagne, F. (2005). From gifts to talents: The DMGT as a developmental model. In R. J. Sternberg and J. E. Davidson (Eds.), Conceptions of giftedness (2nd ed.), pp. 98-119. New York: Cambridge University Press.

Gardner, H. (1983). *Frames of mind: The theory of multiple intelligences.* New York: Basic Books.

Gardner, H. (1995). Reflections on multiple intelligences. *Phi Delta Kappan, 77*(3), 200-208.

Gardner, H. (1999). *Intelligence reframed: Multiple intelligences for the 21st century.* New York, NY: Basic Books.

Garvis, S. & Pendergast, D. (2011). An investigation of early childhood teacher self-efficacy beliefs in the teaching of arts education. *International Journal of Education & the Arts*, *12*(9).

Goddard, R.D., Hoy, W.K., Woolfolk, A. (2000). Collective teacher efficacy: Its meaning, measure, and effect on student achievement. *American Education Research Journal, 37*(2), 479-507.

Gottfried, W. A., Gottfried,E. A., Bathurst, K., Diana Wright Guerin, W. D. (1994). *Gifted IQ: Early Developmental Aspects - The Fullerton Longitudinal Study.* New York: Plenum Press.

Gökdere, M. & Ayvacı, H. Ş. (2004). Sınıf Öğretmenlerinin Üstün Yetenekli Çocuklar ve Özellikleri İle İlgili Bilgi Seviyelerinin Belirlenmesi. *Ondokuz Mayıs Üniversitesi Eğitim Fakültesi Dergisi, 18.*

Gökdere, M. & Çepni. S. (2004). Üstün Yetenekli Ögrencilerin Fen Ögretmenlerinin Hizmet İçi İhtiyaçlarının Degerlendirilmesine Yönelik Bir Çalısma; Bilim Sanat Merkezi Örneklemi. *Gazi Ünv. Egitim Fak. Dergisi, 24* (2), 1-14.

Gökdere, M., Küçük, M. & Çepni, S. (2004). Eğitim Teknolojilerinin Üstün Yetenekli Öğrencilerin Fen Eğitiminde Kullanımı Üzerine Bir Çalışma: Bilim Sanat Merkezleri Örneklemi. *The Turkish Online Journal of Educational Technology, 3* (2), 149-157.

Grace, H. V. J., (2010). Teachers' Perceptions regarding Gifted and Talented Early Childhood Students (Three to Eight Years of Age), Ph.D. Dissertation. Saint Louis University. *ProQuest LLC.*

Gross, M. U. M. (1999). Small poppies: Highly gifted children in the early years. *Roeper Review, 21(3),* 207–214.

Gross, M. U. M. (2002). Gifted children and the gift of friendship. *Understanding Our Gifted, 14(3)*, 27–29.

Gurgun, M. (1980). *Ustun Beyin Gucu Egitimi ve Fen Lisesi Tecrubesinin Sosyo Ekonomik Bakimindan Degerlendirilmesi*. Ankara: Devlet Planlama Teskilati Yayinlari.

Hansen, J. B. & Feldhusen, J. F. (1994). Comparison of trained and untrained teachers of gifted students. *Gifted Child Quearterly, 38*(3), 115-123.

Harrison, C. (2004). Giftedness in early childhood: The search for complexity and connection. *Roeper Review, 26*(2), 78.

Hawkins, V.J. (2009). Barriers to implementing differentiation: Lack of confidence, efficacy and perseverance. *The National English Reading Association Journal*, 44, 11-16.

Hertzberg-Davis, H., & Callahan, C. (2008). A narrow escape gifted students' perception of advanced placement and international baccalaureate programs. *The Gifted Child Quarterly, 52*(3), 199-216.

Hertzog, N. (2005). Equity and access: Creating general education classrooms responsive to potential giftedness. *Journal for the Education of the Gifted, 29*(2), 213-257.

Hodge, K. A., & Kemp, C. R. (2000). Exploring the nature of giftedness in preschool children. *Journal for the Education of the Gifted, 24*(1), 46–73.

Hodge, K. A., & Kemp, C. R. (2006). Recognition of giftedness in the early years of school: Perspectives of teachers, parents and children. *Journal for the Education of the Gifted, 30*(2), 164–204.

Inan, H. Z., Bayindir, N., Demir, S. (2009). Awareness Level of Teachers about the Characteristics of Gifted Children. *Australian Journal of Basic and Applied Sciences*, *3*(3), 2519-2527.

Jackson, N. E. (2003). Young gifted children. In N. Colangelo, & G. Davis (Eds.), Handbook of gifted education (3rd ed.). Boston, MA: Allyn and Bacon.

Jackson, P. S., & Moyle, V. F. (2009). With Dabrowski in Mind: Reinstating the Outliers in Support of Full-Spectrum Development. *Roeper Review*, 31 150–160.

Johnsen, S.K., Ryser, G., and Dougherty, E. (1993) The validity of product portfolios in the identification of gifted students. *Gifted International: A Talent Development Journal*, *8*, 40-43.

Johnson, D., VanTassel-Baska, J., Avery, D. L., (2002). Using Performance Tasks in the Identification of Economically Disadvantaged and Minority Gifted Learners: Findings From Project STAR *Gifted Child Quarterly Spring* 46 (2) 110-123.

Jolly, J. L. (2009). Historical perspectives Sidney P. Marland, *Gifted Child Today 32*(4).

Journal of Science (2010), *Science and Art Centers* (No: 2530- 64). Ankara: Goverment Printing Office. (Tebliğler Dergisi, 2001.Bilim Sanat Merkezleri Yönergesi, Sayı: 2530, Cilt: 64)

Kaplan, S. N. (1994) *Differentiating the core curriculum and instruction to provide advanced learning opportunities.* Sacramento, CA: California Department of Education.

Karakurt, B. (2003). Sınıf Yönetiminde Üstün Zeka ve yetenekli Öğrencilere Yönelik Öğretmen Tutumu. *Eğitişim Dergisi*, 2.

Karnes, M. B., & Johnson, L. J. (1991). The preschool/primary gifted child. *Journal for the Education of the Gifted, 14*(3), 267–283.

Kaufman, B. S., & Sternberg, J. R. (2008). Concept of Giftedness. In Preiffer, I. S. (Eds.), *Handbook of giftedness in Children*. NY: Springer.

Kaufman, J. C., & Baer, J. (2009). Is one dimension enough? *Perspectives on Psychological Science,* 4, 453-454.

Kim, K. H. (2005). Can only intelligent people be creative? A meta–analysis, *Journal of Secondary Gifted Education, 16*(2), 57–66.

Kitano, M. K. (1982). Young gifted children: Strategies for preschool gifted. *Young*

Children. 37(4), 14–24.

Kontaş, H. (2009). *Bilsem Öğretmenlerinin Program Geliştirme İhtiyaçlarına İlişkin Geliştirilen Programın Etkililiği.*Unpublished Master Thesis, Hacettepe Üniversitesi Sosyal Bilimler Enstitüsü Eğitim Bilimleri Anabilim Dalı Eğitim Programları ve Öğretim Bilim Dalı, Ankara.

Lee, L. (1999). Teachers' Conceptions of Gifted and Talented Young Children. *High Ability Studies 10*(2).

Lee, S. Y., Cramond, B., & Lee, J. (2004). Korean teachers' attitudes towards academic brilliance. *Gifted Child Quarterly, 48*, 42-53.

Levent, F. (2011). *Üstün Yetenekli Çocukların Hakları*. İstanbul: Çocuk Vakfı Yayınları.

Louis, B., & Lewis, M. (1992). Parental beliefs about giftedness in young children and their relation to actual ability level. *Gifted Child Quarterly, 36*(1), 27–31.

Lubinski, D., Webb, R. M., Morelock, M. J., & Benbow, C. P. (2001). Top 1 in 10,000: A 10-year follow up of the profoundly gifted. *Journal of Applied Psychology, 86,* 718-729.

Marland, S. P., Jr. (1972). *Education of the gifted and talented: Report to the Congress of the United States by the U.S. Commissioner of Education*. Washington, DC: Government Printing Office.

Marshall, P. J., Fox, N. A., & The Bucharest Early Intervention Project [BEIP] core group (2004). A comparison of the electroencephalogram between institutionalized and community children in Omani. *Journal of Cognitive Neuroscience, 16*(8), 1327–1338.

McBride, N. (1992). Early Identification of the Gifted and Talented Students: Where Do Teachers Stand? *Gifted Education International*, *8*, 19-22.

McCoach, B. Siegle, D. (2001). A comparison of high achievers' and low achievers' attitudes, perceptions, and motivations. *Academic Exchange Quarterly, 5*(2), 71-83.

McCoach, D. B., & Siegle, D. (2003). The structure and function of academic self concept in gifted and general education students. *Roeper Review, 25,* 61-65.

McCoach, B. & Siegle, D. (2007). What predicts teachers' attitudes towards the gifted? *Gifted Child Quarterly (51)3*, 246-255.

McWilliam, R. A. (2005). Assessing the resource needs of families in the context of early intervention. In M. J. Guralnick (Ed.), *A developmental systems approach to early intervention: National and international perspectives* (pp. 215–234). Baltimore, MD: Paul H. Brookes.

Meyers, E. (1984). A study of concerns of classroom teachers regarding a resource room for the gifted. *Roeper Review, 7*, 32-36.

Miller, E. (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.

Mills, C. J., & Durden, W. G. (1992). Cooperative learning and ability grouping: An issue of choice. *Gifted Child Quarterly, 36*(1), 11–16.

Ministray of Education, Regulations on Early Childhood (2004). Retrieved July 20, 2012, from http://mevzuat.meb.gov.tr/html/25486_.html

Ministray of Education, Regulation on Science and Art Centers (2009). Retrieved July 18, 2012 from http://mevzuat.meb.gov.tr/html/2530_1.html

Ministray of Education, Regulation on Science and Art Centers (2009). Retrieved July 18, 2012 from http://mevzuat.meb.gov.tr/html/2593_0.html

Moon, T. R., & Brighton, C. M. (2008). Primary teachers' conceptions of giftedness. *Journal for the Education of the Gifted, 3*(4), 447–480.

Morelock, M. J. (1996). Perspectives of giftedness: On the nature of giftedness and talent: Imposing order on chaos. *Roeper Review, 19* (1), 4-12.

Neihart, M. (1996). The Socioaffective Impact of Acceleration and Ability Grouping: Recommendations for Best Practice. *Gifted Child Quarterly, 51*(4), 330 – 341.

Neihart, M. (1999). The impact of giftedness on psychological well-being: What does the empirical literature say? *Roeper Review, 22* (1) 10-17.

Neihart, M. (2007). The socio–affective impact of acceleration and ability grouping: Recommendations for best practice. *Gifted Child Quarterly, 51*(4), 330–341.

Neumeister, K., Adams, C., Pierce, R., Cassady, J., & Dixon, F. (2007). Fourthgrade Teachers' Perceptions Of Giftedness: Implications For Identifying And Serving Gifted Diverse Populations. *Journal for the Education of the Gifted, 30*(4), 479-499.

Özgüven, İ. E. (2007). *Psikolojik Testler*. Ankara: PDREM Yayınları.

Özsoy, Y., Özyürek, M. & Eripek, S. (2002). *Özel Eğitime Muhtaç Çocuklar, Özel Eğitime Giriş*. Ankara: Karatepe Yayınları.

Pajares, M. F. (1992). Teachers' beliefs and educational research: cleaning up a messy construct. *Review of Educational Research, 62*(3), 307-333.

Panov, V. I. (2002). Gifted Children: Identification, Teacing and Development. *Russian Education and Society*, *44* (10), 52–80.

Parliamentary Assembly Council of Turkey (2001). Retrived August, 20, 2012 from http://www.tbmm.gov.tr/arastirma_komisyonlari/ustun_yetenekli/docs/Ara%C5%9Ft%C4%B1rma%20Komisyonu%20%C3%96nerge%20Metinler.pdf.

Pfeiffer, S. I. (2003). Challenges and opportunities for students who are gifted: What the experts say. *Gifted Child Quarterly, 47*(2), 161–169.

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.

Plunket, M. (2000). Educating teachers to meet the needs of gifted students: an option or a necessity. *Talented 18*(2), 9-16.

Porter, L., (1999). *Gifted Young Children: A Guide for Teachers and Parents*. Buckingham: Open University Press.

Preckel, F., Götz, T.,& Frenzel, A. (2010). Ability grouping of gifted students: Effects on academic self-concept and boredom. *British Journal of Educational Psychology* 80, 451-472.

Rash, P. K. & Miller, A. D. (2000). A survey of practices of teachers of the gifted. *Roeper Review*, 22, 192-194.

Renzulli, J. S. (1979). What makes giftedness?: Reexamining a definition. *Phi Delta Kappan, 60,* 180–184.

Renzulli, J. S., & Reis, S. M. (1994). Research related to the school-wide enrichment triad model. *Gifted Child Quarterly, 38*(1), 7-20.

Renzulli, J. S., & Reis, S. M. (2002). What is school-wide enrichment? How gifted programs relate to total school improvement. *Gifted Child Today, 25*(4), 18–25, 64.

Robinson, N. M. (1995). Rescuing the baby: A commentary on the bell curve. *Gifted Child Quarterly, 39*(3), 180–182.

Robinson, A. (1993). Promising practices for talented children. *Understanding Our Gifted*, 5(2), 1-10.

Roedell, Wendy C.(1984). Vulnerabilities of highly gifted children. *Roeper Review, 6*(3) 127-130.

Roedell, W. C., Jackson, N. E., & Robinson, H. B. (1980). *Gifted young children*. New York: Teachers College, Columbia University.

Roeper, A. (1977). The young gifted child. *Gifted Child Quarterly, 21*(3), 388–396.

Rogers, K. B. (2002). *Reforming gifted education: Matching the program to the child.* Scottsdale, AZ: Great Potential Press.

Rogers, K. B. (1998). Using current research to make "good" decisions about grouping. *National Association for Secondary School Principals Bulletin, 82*(595), 38-46.

Rotigel, J. V. (2003). Understanding the young gifted child: Guidelines for parents, families, and educators. *Early Childhood Education Journal, 30*(4), 209–214.

Rubenzer, R. L., & Twaite, J. A. (1983). Attitudes of 1200 educators toward the education of the gifted and talented: implication for teacher preparation. *Journal for the Education of the Gifted, 2*(4), 202-212.

Ruf, L. D. (2005). *Losing our minds: Gifted children left behind*. Scottsdale: Great Potential Press.

Sak, U. (2008). Üstün Zekalı Öğrenciler. In Diken, İ., H (ed.) *Özel Eğitime Gereksinimi Olan Öğrenciler ve Özel Eğitim İçinde (499-535),* Ankara: Pegem Yayınevi.

Sak, U. (2010). *Üstün Zekalılar Özellikleri Tanılanmaları Ve Eğitimleri*. Ankara:Maya Akademi.

Sak, U. (2011). Prevalence of misconceptions, dogmas, and popular views about giftedness and intelligence: A case from Turkey, *High Ability Studies, 22(2),* 179-197.

Samuels, C. A. (2005). N.C. program holds promise for gifted classes. *Education Week, 24(40),* 5-10.

Samuels, C.A. (2008). Response to intervention sparks interest, questions. *Education Digest. 73*(8) 21-24.

Sankar–DeLeeuw, N. (1999). Gifted preschoolers: Parent and teacher views on identification, early admission, and programming. *Roeper Review, 21*(3), 174-179.

Sankar–DeLeeuw, N. (2002). Gifted preschoolers: Parent and teacher views on identification, early admission, and programming. *Roeper Review, 24*(3), 172–177.

Senemoglu, N., Demirel, M., Yagci, E., & Üstündağ, T. (2009). İlköğretim sınıf öğretmenlerinin öz yeterlik inanç düzeyleri (Elementary school teachers' self-efficacy beliefs). *Humanity& Social Sciences Journal 4*(2)164-171.

Senemoğlu, N. (2005). *Gelişim, Öğrenme ve Öğretim: Kuramdan Uygulamaya* (12nd ed.). Ankara: Gazi Kitapevi.

Shaklee, B. D. (1992, Winter). Identification of young gifted students. *Journal of the Education of the Gifted, 15*(2), 134-44.

Siegle, D., & Powell, T. (2004). Exploring teacher biases when nominating students for gifted programs. *Gifted Child Quarterly, 48*, 21-29.

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. (1993). The gifted individual. In L.K. Silverman (Ed.), *Counseling the gifted and talented* (pp. 3-28). Denver: Love Publishing Company.

Shaha–Coltrane, S. (Ed.). (2006 Fall). News from early childhood division chair, early childhood division newsletter, 1–2, Retrieved August, 13, 2012 from www.nagc.org/.../About.../Division.../EC_Fall_Newsletter_2006.pdf

Snowden, P. L. (1995). Educating young gifted children. *Gifted Child Today,* 24-25,. Abroms, K. I. (1982). Classroom interactions of gifted preschoolers. *Teaching Exceptional Children. 14,* 223-225.

Starko, A. J., & Schack, G. D. (1989). Perceived need, teacher efficacy, and teaching strategies for the gifted and talented. *Gifted Child Quarterly, 33*, 118–122.

Starnberg, R. J., & Grigorenko, E. (1997). *Intelligence Heredity and Environment*. USA: Cambridge University Press.

Sternberg, R. J. (1997). Developing your child's successful intelligence. *Teaching for High Potential*, 8–10.

Sternberg, R. J. (2000). Wisdom as a form of giftedness. *Gifted child quarterly, 44*(4), 252-259.

Sternberg, R. J. (2005). WICS: A model of giftedness in leadership. *Roeper Review, 28*(1), 37–44.

Swanson, J. (2006). Breaking through assumptions about low-income, minority gifted students. *Gifted Child Quarterly, 50*(1), 11-25.

Tannenbaum, J. A. (1983). *Gifted Children: Psychological and Educational Perspectives.* Macmillan Pub Co

Tannenbaum, A.J. (1992). Early signs of giftedness: Research and commentary. *Journal for the Education of the Gifted. 15(2),* 104-133.

Terman, L. M. (1926). *Genius studies of genius: Mental and physical traits of a thousand gifted children.* Stanford, CA: Stanford University Press.

Tomlinson, C., Callahan, C., Tomchin, C., Eiss, N., Imbeau, M., & Landrum, M. (1997) Becoming architects of communities of learning: Addressing academic diversity in contemporary classrooms. *Exceptional Children*, 63, 269-282.

Tomlinson, C. (2004, August). Differentiation in diverse settings: A consultant's experience in two school districts. *The School Administrator*, 28-35.

Tomlinson, C., Brighton, C., Hertberg, H., Callahan, C., Moon, T., Brimijoin, K., Conover, L., & Reynolds, T. (2004). Differentiating instruction in response to student readiness, interest, and learning profile in academically diverse classrooms: A review of literature. *Journal for the Education of the Gifted, 27(2-3)*, 199-145.

Tschannen-Moray, M., Hoy, A.i Hoy, W. K. (1998). Teacher efficacy: Its meaning and measure. *Review of Educational Research 68*(2), 202-248.

VanTassel–Baska, J. L., & Little, C. (Eds.). (2003). *Content–based curriculum for gifted learners.* Waco, TX: Prufrock.

VanTassel–Baska, J. L., & Stambaugh, T. (2005). Challenges and possibilities for serving gifted learners in the regular classroom. *Theory Into Practice, 44*(3), 211–217.

VanTassel-Baska, J., Johnson, D. T., Hughes, C., & Boyce, L. N. (1996). A study of language arts curriculum effectiveness with gifted learners. *Journal for the Education of the Gifted, 19*, 461-480.

VanTassel-Baska, J., Zuo, L., Avery, L. D., & Little, C. A. (2002). A curriculum study of gifted-student learning in the language arts. *Gifted Child Quarterly, 46*(1), 30-44

Vydra, J., & Leimbach, J. (1998). Planning curriculum for young gifted children. In J. F. Smutny (Ed.), *The young gifted child: Potential and promise, an anthology* (pp. 462-75). Cresskill, NJ: Hampton Press.

Wang, J., Elicker, J., McMullen, M., & Mao, S. (2008). Chinese and American preschool teachers' beliefs about early childhood curriculum. *Early Child Development & Care, 178*(3), 227-249.

Wilson, R. S. (1983). The Louisville Twin Study: Developmental synchronies in behavior. *Child Development, 54*(2), 298–316.

Winner, E. (1996). *Gifted children: Myths and realities.* New York, NY: Basic Books.

White, J. (2006) *Intelligence, Destiny and Education: the ideological roots of intelligence testing*, London: Routledge.

Whitmore, J. R. (1980). *Giftedness, conflict, and underachievement.* Boston, MA: Allyn and Bacon.

Whitmore, J. R. (1986). *Intellectual giftedness in young children: Recognition and development.* NY: Haworth.

Woolfolk, A. E. & Hoy, W. K., (1990). Prospective teachers' sense of efficacy and beliefs about control, *Journal of Educational Psychology, 82*, 81-91.

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

Wright, L. (1990). Social and nonsocial behavior of precious preschoolers during free play. *Roeper Review, 12*(4), 269–274.

Appendix A:

LIST OF INSTITUTIONS, ORGANIZATIONS AND NGOS RELATED WITH GIFTED CHILDREN

ÜSTÜN YETENEKLİ ÇOCUKLARLA İLGİLİ KURUM, KURULUŞ VE STK'LAR

Resmi Kurumlar

Millî Eğitim Bakanlığı Özel Eğitim ve Rehberlik Hizmetleri Genel Müdürlüğü

Üstün Yetenekli Çocuklarla İlgili STK'lar

KURUM ADI İLİ İLÇESİ

ANKARA ÜSTÜN YETENEKLİLERİN EĞİTİMİNİ DESTEKLEME DERNEĞİ ANKARA KEÇİÖREN
AYDIN ÜSTÜN YETENEKLİLERİN EĞİTİMİNİ DESTEKLEME DERNEĞİ AYDIN MERKEZ
ÇOCUK VAKFI İSTANBUL NİŞANTAŞI
DENGE ÜSTÜN ZEKALILAR VE ENGELLİLER EĞİTİM KÜLTÜR YARDIMLAŞMA VE İSTİHDAM DERNEĞİ BALIKESİR MERKEZ
TÜRKİYE ÜSTÜN YETENEKLİ ÇOCUKLARI EĞİTİM VAKFI İSTANBUL CAĞALOĞLU
İSTANBUL ÖZEL VE ÜSTÜN YETENEKLERİ ÇOCUKLAR EĞİTİM VE YARDIMLAŞMA DERNEĞİ İSTANBUL KADIKÖY
KASTAMONU ÜSTÜN YETENEKLİLERİN EĞİTİMİNİ DESTEKLEME DERNEĞİ KASTAMO NU MERKEZ
MALATYA ÜSTÜN YETENEKLİLERİN EĞİTİMİNİ DESTEKLEME DERNEĞİ MALATYA MERKEZ
ORDU ÜSTÜN YETENEKLİLERİN EĞİTİMİNİ DESTEKLEME DERNEĞİ ORDU MERKEZ

SİNOP ÜSTÜN YETENEKLİLERİN EĞİTİMİNİ DESTEKLEME DERNEĞİ SİNOP MERKEZ
TEKİRDAĞ ÜSTÜN VE ÖZEL YETENEKLİ ÖĞRENCİLERİ VE MERKEZLERİNİ KORUMA DERNEĞİ TEKİRDAĞ MERKEZ
TOKAT ÜSTÜN YETENEKLİLERİN EĞİTİMİNİ DESTEKLEME DERNEĞİ TOKAT MERKEZ
ÜSTÜN YETENEKLİ ÖĞRENCİLERİ DESTEKLEME DERNEĞİ İZMİR KONAK
ÜSTÜN YETENEKLİLERİN EĞİTİMİ FEDERASYONU ANKARA ALTINDAĞ
ÜSTÜN ZEKALI GENÇLERİ TESBİT GELİŞTİRME VE YARDIM DERNEĞİ İZMİR KONAK
ÜSTÜN ZEKALI VE ÜSTÜN YETENEKLİ GENÇLER AKADEMİSİ DERNEĞİ BURSA OSMANGAZİ
ÜSTÜN ZEKALI VE YETENEKLİ ÇOCUKLAR DERNEĞİ ANKARA KEÇİÖREN
BAYRAMPAŞA BELEDİYESİ BİLİM MERKEZİ İSTANBUL BAYRAMPAŞA
TÜRKİYE ZEKA VAKFI (http://www.tzv.org.tr/) ODTÜ-Teknokent ANKARA

Kaynak: http://dernekler.icisleri.gov.tr/Dernekler/Kurum/DernekAdiArama.aspx

İnternet Siteleri

Üstünzekalılar Enstitüsü- http://www.ustunzekalilar.org/

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Türkiye Üstün Yetenekli Çocukları Eğitim Vakfı - http://www.tuycev.org/

Üstunzekalı Çocuk Organizasyonu - http://ustunzekalicocuk.com

http://www.ustunveozel.com/

Kitap, Makale ve Yazılar

Üstün Yetenekli Çocuklar-Yazar: Ahmet Bildiren

Üstün Zekâlı Bir Çocuğa Sahip Olmak - Faruk Levent

Üstün Yetenekli Çocuğa Sahip Olan Ailelerin Hakları - Yrd.Doç.Dr. Faruk Levent

Ya Einstein, ya da Hitler... - Dünya Üstün Yetenekli Çocuklar Konseyi Başkanı Prof. Dr. Wu—Tien Wu

Üstün Zekalı Ve Yetenekli Çocukların Eğitimi - Norma E. Cutts, Nicholas Moseley - Çeviren: Prof. Dr. İSMAİL ERSEVİM

Adam Olacak Çocuk - Ayşegül Aydoğan

Üstün yetenekliler için saray okulu - Prof. Dr. Füsun AKARSU

Dahi olarak doğan çocuklar - Yalçın Güran

TÜBİTAK - Araştırma - Türkiye'de 0-24 yaş aralığında 682 bin üstün zekalı birey var ve bu sayı nüfusun yüzde 2'sini oluşturuyor

Yapılan Etkinlikler

I. Türkiye Üstün Yetenekli Çocuklar Kongresi 23-25 Eylül 2004

Türkiye Üstün Yetenekli Çocuklar II. Ulusal Kongresi - 25-27 Mart 2009

I.Uluslararası Üstün Yetenekliler Eğitimi Sempozyumu - 23 Eylül 2010

3. Türkiye Üstün Yetenekli Çocuklar Kongresi - Hacettepe Üniversitesi - 14-16 Kasım 2012 - http://www.ustuncocuk2012.org/

Appendix B: The Interview Questions Used in the Study

GÖRÜŞME FORMU

Görüşmeci: Gün-saat:

Süre: Yer:

Doğum yılınız:

Mezun olduğunuz okulun ismi ve mezuniyet yılınız:

Eğitim dereceniz:

Meslek tecrübesi : şimdiye kadar hangi okullarda çalıştınız?

Erken çocukluk eğitimi ile ilgili üyesi olduğunuz dernek ya da takip ettiğiniz yayın var mı?

1) Zeka sizce nedir?
2) Zeka sizce geliştirilebilir mi?
    a. Nasıl geliştirilebilir?
3) Üstün zeka denince aklınıza ilk gelen nedir?
4) Ailenizde ya da çevrenizde hiç üstün zekâlı ya da yetenekli bir çocuk ile karşılaştınız mı?
5) Üstün zekalı çocukların eğitimi ile ilgili ne düşünüyorsunuz?
6) 10) Üstün zekâlı çocukların normal sınıf içerisinde mi yoksa benzer özelliklere sahip çocuklarla mı eğitilmesi daha uygundur?
7) Üstün zekâlı bir çocuğu beş sıfat ile tanımlayabilir misiniz?
8) Üstün zekalı çocukları yaşıtlarından ayıran en belirgin özelliği sizce nedir?

9) Diyelim ki; sınıfınızda üstün zekâlı bir çocuk olduğunu düşünüyorsunuz. Ne yaparsınız?

   a. Üstün zekalı çocuk ile başa çıkabilmek için neler yaparsınız?
   b. Okul yönetimine nasıl iletir, onlardan ne gibi destekler istersiniz?
   c. Aile ile nasıl bir iletişim kurar, onları nasıl yönlendirirsiniz?

10) Diyelim ki sınıfınızda üstün zekalı tanısı konmuş bir çocuğunuz var.

   a. Ne hissedersiniz?
   b. Sınıf içi uygulamalarınızda ne gibi değişiklikler yaparsınız?
   c. Ne gibi zorluklar ile karşılaşırsınız?
   d. En çok nelere ihtiyaç duyarsınız?

   Şimdi soracağım sorulara evet, hayır, bilmiyorum gibi cevaplar verilebilir.

11) Sizce üstün zekalı çocuk, normal gelişim gösteren çocuklara göre;

- Daha hızlı öğrenir.
- Mükemmeliyetçilerdir.
- Sınıf içinde sınıf düzenini bozan davranışları sıklıkla sergiler.
- Kolay sıkılır.
- Daha meraklıdır.
- Soyut kavramları daha kolay anlar.
- Daha yaratıcıdır.
- Her zaman daha başarılıdır.
- Daha hareketlidir
- Hafızaları daha güçlüdür.
- Erken okur.
- Rutinleri takip etmekten hoşlanmaz.
- Sözel becerileri yüksektir.
- Uyumsuzdurlar.
- Liderdir.
- Yetişkinlerin ilgilendiği konularla ilgilenirler.
- Basit çözüm yolları yerine daha karmaşık olanı seçerler.

- Neden sonuç ilişkisi kurmakta başarıdırlar.
- Dikkatleri uzun sürelidir.

12) Öğretmenlik eğitiminiz sürecinde üstün zekalı çocukların eğitimi ile ilgili hiç ders aldınız mı? Aldığınız derslerin isim ve içeriği hakkında bilgi verir misiniz? *(Aldığınız bu dersin sınıf içi uygulamalarınızda yararlı olduğunu düşünüyor musunuz?)*
13) Öğretmenlerin üstün zekalı çocukların eğitimi alanında eğitim almış olması gerekmekte midir?
14) Öğretmen olarak üstün zekalı / yetenekli çocuklar ile ilgili kendinizi yeterli hissediyor musunuz?
15) Bu konuda yeterli hissedebilmek için nelere ihtiyaç duyuyorsunuz?

Appendix C: Inform Consent Used in the Study

Gönüllü Katılım Formu

Bu çalışma, Orta Doğu Teknik Üniversitesi Sosyal Bilimler Enstitüsü Erken Çocukluk Eğitimi Tezli Yüksek Lisans Programı öğrencisi Feride Tezcan'ın yüksek lisans tez çalışmasıdır. Çalışmanın adı "Okul Öncesi Öğretmenlerinin Üstün Zekalı Çocuklara Karşı Olan Algıları Ve Onların Eğitimi Konusundaki İhtiyaçları" dır. Çalışmanın amacı, okul öncesi öğretmenlerinin üstün zekalı öğrenciler hakkındaki algıları ve farkındalık düzeylerini belirlemektir. Öğretmenlerin, üstün zekalı çocukların eğitimi konusunda mesleki ihtiyaçları ortaya konarken, aileler ve çalıştıkları kurumlardan da beklentilerinin saptanması amaçlanmaktadır.

Çalışmaya katılım tamamıyla gönüllülük temelinde olmalıdır. Bilgi toplamada mülakat yöntemi kullanılacaktır. Mülakat esnasında sizden kimlik belirleyici hiçbir bilgi istenmemektedir. Cevaplarınız tamamen gizli tutulacak ve sadece araştırmacı tarafından değerlendirilecektir; elde edilecek bilgiler sadece çalışma sahibinin yüksek lisans tezinde ve bilimsel yayınlarda kullanılacaktır.

Mülakat, genel olarak kişisel rahatsızlık verecek soruları içermemektedir. Ancak, katılım sırasında sorulardan ya da herhangi başka bir nedenden ötürü kendinizi rahatsız hissederseniz cevaplamayı yarıda bırakmakta serbestsiniz. Böyle bir durumda mülakatı uygulayan kişiye devam etmek istemediğinizi söylemeniz yeterli olacaktır. Mülakat sonunda, bu çalışma ile ilgili sorularınız cevaplanacaktır.

Çalışma hakkında daha fazla bilgi almak isterseniz tez danışmanım, Eğitim Fakültesi İlköğretim Bölümü Okul Öncesi Öğretmenliği Bölümü öğretim üyesi, **Yrd.Doç.Dr. Feyza Tantekin Erden** (Tel: 0 312 2103699; E-posta: tfeyza@metu.edu.tr) ya da araştırma sahibi ben **Feride Tezcan** (Tel:5392000525; E-posta: feride.tezcan@gmail.com) ile iletişim kurabilirsiniz.

Bu çalışmaya katıldığınız için teşekkür ederim.

Bu çalışmaya tamamen gönüllü olarak katılıyorum ve istediğim zaman yarıda kesip çıkabileceğimi biliyorum. Verdiğim bilgilerin bilimsel amaçlı yayınlarda kullanılmasını kabul ediyorum.

İsim Soyad Tarih İmza

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Appendix D: Tez Fotokopisi İzin Formu

TEZ FOTOKOPİ İZİN FORMU

ENSTİTÜ

Fen Bilimleri Enstitüsü…… ☐

Sosyal Bilimler Enstitüsü…… ■

Uygulamalı Matematik Enstitüsü……. ☐

Enformatik Enstitüsü…….. ☐

Deniz Bilimleri Enstitüsü……. ☐

YAZARIN

Soyadı : TEZCAN

Adı : FERİDE

Bölümü : OKUL ÖNCESİ EĞİTİMİ

TEZİN ADI (İngilizce) : PERCEPTIONS OF EARLY CHILDHOOD TEACHERS TOWARDS YOUNG GIFTED CHILDREN AND THEIR EDUCATION

TEZİN TÜRÜ : Yüksek Lisans ■ Doktora ☐

1. Tezimin tamamı kaynak gösterilmek şartıyla tezimin fotokopisi alınsın. ☐
2. Tezimin içindekiler sayfası, özet, indeks sayfalarından ve/veya bir bölümünden kaynak gösterilmek şartıyla fotokopi alınabilir. ☐
3. Tezim bir (1) yıl süreyle erişime kapalı olsun. ■

TEZİN KÜTÜPHANEYE TESLİM TARİHİ