

Unusual Topics in Preschool Gifted and Talented Children

Remzi Y. Kincal¹, Ramzan Abaci², Çağlar Çetinkaya³, Muhammet Usak⁴ and Gamze İnci⁵

¹ Faculty of Education, Ataturk University, Erzurum, Turkey
E-mail: rkincal@yahoo.com

² Faculty of Education, Istanbul T. University, Istanbul, Turkey
E-mail: rabaci@gmail.com

³ Faculty of Education, Dumlupinar University, Kutahya, Turkey
E-mail: caglarcetinkaya@yandex.com

⁴ Faculty of Education, Dumlupinar University, Kutahya, Turkey
E-mail: muhammet.usak@dpu.edu.tr

⁵ Faculty of Education, Duzce University, Duzce, Turkey
E-mail: gmz-ii-63@hotmail.com

KEYWORDS Gifted and Talented. Unusual Topics. Pre-school. Curriculum

ABSTRACT the aim of this study is to specify the subjects which preschool gifted and talented children put forward their unusual ideas and that they have never been dealt with before. The study was carried out with 38 preschool children who attended a summer program that was organized for the gifted and talented children in 2010. In this study, descriptive model and qualitative research techniques were used. The data obtained by semi-structured interviewing was analyzed through qualitative research techniques. The method of interview was preferred because preschoolers did not know how to write. As a result of the analysis, the topics which are perceived as highly unusual by the gifted and talented preschool children were grouped under the topics such as space and astrobiology, technological improvements, unusual scientific applications, existence, occupational interests, different countries and cultures, moral values, abstract historical researches....the results obtained were compared to teachable topics for the students. Some suggestions are presented in the study for developing a new model and curriculum for such topics that differ almost completely from a normal educational program.

INTRODUCTION

Human beings possess the utmost qualities among all others. The superiority of human beings, come in part from the rate of adaptation to the environment and has undergone a dazzling change with the roles he created for himself. The individuals who led to the greatest changes have frequently been the ones which are gifted and talented somehow. It is crucial to identify the gifted and talented accurately and educate them.

Gifted and talented children differ mainly from their peers in their cognitive qualities. These qualities can be named as; leadership, perfectionism, curiosity, thorough comprehension, attending to details, quick apprehension, reasoning, applying analogies, solid arguing, self-learning, ability to form patterns between topics, making

predictions, self-criticism, producing original ideas, self-expression, decisiveness, creativity, (Renzulli 1978; Cutts and Mooseley 2001; Omeroglu 2004; Koksall 2007; Sak 2010).

High creative thinking of these children plays a significant role on this difference in cognitive abilities. In this sense, their unusual way of thinking and their creativity are two important areas in which they stand out. It is considered that their unusual ability is an important factor especially in discovering their creative thinking. For the emergence of outstanding talent, one of the target areas which are aimed to develop by many models and theories of gifted education is creativity.

Renzulli (1986) stated that gifted and talented individuals have three basic clusters which are interrelated. These are; general and specific abilities, motivation, and creativity. The general abilities are verbal and numeric reasoning, abstract thinking, memory and fluency. Specific abilities are; abilities in technical areas such as music, theatre, mathematics, science, chemistry. Motivation is perceived as the ability of undertaking superior tasks. Creativity is generating new ideas and being able to use it in solving problems. In-

Address for correspondence:

Dr. Çağlar Çetinkaya

Asst. Prof.

Faculty of Education,
Dumlupinar University,
Tavsanlı Yolu, 10.km Evliya Celebi Yerleşkesi,
43100 Kutahya, Turkey
Telephone: +902742652031

E-mail: caglarcetinkaya@yandex.com

teractions among the three clusters were necessary for outstanding success. For the eligibility, students must be more successful than %85 of his peers. Along with this, if s/he is %98 successful in any of these clusters, s/he is considered to be gifted and talented (Renzulli 1978; 1986; 1998).

In his triarchic theory of intelligence Sternberg discusses on three types of intelligences. These are analytic, practical and creative intelligences (Sternberg 1999). The role of the creativity on superior intelligence was not known until 50 years later that Terman (1916) used the earliest intelligence tests to define the gifted and talented. Until then unusual intelligence used to be defined through IQ scores and creativity was considered within IQ (Kaufman 2009). The Maryland Report which was published in 1922 is the first formal document which accepts creativity as a part of unusual intelligence. In the report it was stated that superior intelligence cannot be tested only through intelligence tests and the superior intelligence was defined as being successful at one or some areas such as general cognitive ability, personal cognitive ability, creative ability, leadership, visual ability, psycho-motor abilities

There is creativity in each study which was formed by human beings. Although it is as old as human history, especially for the last five centuries creativity has been accepted as a phenomenon that is interrelated with fine arts. Besides currently, creativity in science and technique is highly emphasized as much as it is in art (Matthews and Foster 2005).

There have been many definitions on creativity as in the case of unusual intelligence. The most comprehensive definition was provided by Torrance. Torrance (1974) defined creativity as being perceptive towards missing learning, components, specifying difficulties, looking for solutions, forming hypothesis on missing parts, choosing one of the possible solutions and trying it out, retrying, obtaining results. There are some other different definitions on creativity.

Creativity according to Morris (2002) is to produce new and genuine ideas that raise social value. And creativity is an ability which exists in every individual and in every field of life; it is a whole of the processes that covers a large part of our lives, a way of attitude and behavior (San 1979). Omeroglu (2001) Barlett, Wallach and Kogan, Guilford deals with it as breaking the molds, producing ample and original ideas with-

out derailing from the main characteristics, flexibility, originality, fluency, unusual thinking.

Creative thinking is closely interrelated with special interests. These areas depend on Guilford's way of thinking on different ideas. These areas which are also parts of creative problem solving are; fluency, flexibility, enrichment and freedom. Teaching creative thinking on different areas is completely important to production. Out of these areas these can be deduced;

Rationalism; is the ability to think and remember.

Flexibility; is the capacity to put forward new and diverse ideas different from expected.

Enrichment; is detailing the topic, developing ideas, enabling the life to gain a different concept.

Originality; is to synthesize and associate new and original ideas out of the existing ones (Torrance 1966; Perkins 1981; Baska and Stambaugh 2001).

Creativity, intelligence and wisdom are not only innate qualities that are confined as hereditary. They are not neither stable, either. Individuals are able to enhance their creativity, intelligence and wisdom (Sternberg and Grigorenko 2002). A great many intelligence theories propose that superior intelligence can be gained by enhancing creativity. It is pointed out to the Amabile's theory on its three areas which is one of the most appreciated models used for developing creativity. These are; abilities on learning area, abilities related with creativity and motivation for studying (Amabile 1983; Baska and Stambaugh 2006).

Guilford in his model (*the structure of intellect model*) focused on creativity which he aims to develop and on the researches on problem solving (Guilford 1967). Guilford argued that the intelligence cannot be measured thoroughly through traditional testing techniques. Relying on that, he designed cognitive structure model within a three-dimensioned classification system. This system was designed to include and organize 120 proposed dimensions including;

1. types of cognitive processes which are used in the act of thinking (evaluation, the production leading to only one solution, the production leading to many different solutions, memory, knowing), 2. the content types which the thinking process includes (formal, symbolical, semantic, behavioral and 3. the post productions of thinking (units, classes, relations, systems, transformations, deductions).

Unusualness in the Gifted and Talented

There are some important concepts in Guilford (1967) definition for creativity such unconventional thinking, flexibility, originality and fluency. Guilford and other researchers aimed to develop these abilities in order to develop creativity. The unusualness one of the characteristics of the gifted and talented children shows a relationship with their creativity in many cases. Unusualness is condition that help to explain creativity for situations in which we were not aware of the objects falling on earth until Newton explored the gravity. It is not possible to locate any study related to the unusualness in order to develop the creative skills of the gifted and talented children. In this sense, the definition of unusualness of the gifted and talented children will present an idea about how it can affect their creativity.

According to Sak (2010), the gifted and talented people are unusual. Unusualness is a characteristic which is not common and puts forward the difference from the majority except the usual. Caglar (2004a) mentions four different steps for a creative teaching. These are clarity, focus, discipline and closing. As mentioned in the clarity step, it is argued that the development of creativity skills in children is possible by focusing on the unusual thoughts. Unusualness is present in the definition of the gifted and talented U.S. Department of education which proposed they show a high capacity in creativity in an area of creativity, have unusual characteristic and show phenomenal success in academic areas.

The unusualness of the gifted and talented people might lead to some problems. It is sometimes inevitable for an unusual person to be perceived as a problematic individual. The unusual characteristics of the gifted and talented people may not be noticed in the society. This situation emerges when the unusual mental conditions of an individual starts to affect his/ her social and emotional life. Generally, having a different personality has pervasive implications. This process usually causes a personality status which is not accepted in the society. As a result, the society puts the outstanding people into a different class (Sak 2010).

The education of the gifted children especially has a strategic importance for any country to emerge the high level of civilizations. New studies and education programs are necessary in or-

der to develop unusual thoughts one the area in which the gifted children show themselves in the best way. The children will be able to put forward some new and unusual products thanks to their unusual thoughts. So, the development of creativity skills of the gifted and talented children is also important in their producing unusual thoughts. These students who will carry out new inventions by producing original ideas will also create the strategic idea resources of positive sciences.

METHODOLOGY

The study was carried out with 38 gifted and talented preschool children participated in the summer school programs arranged for the gifted and talented children in Istanbul in 2010. The study is descriptive model. Qualitative research model was chosen in the study.

Data Collecting Tool

A semi- structured interview forms in which one open-ended question "which topics are the most unusual to you?" Was used in order to identify the topics which are the most unusual to the gifted and talented children.

Analysis of the Collected Data

The semi-structured interview forms were used in order to provide the qualitative data were applied to 38 gifted and talented preschool students in the research group. The data collected through the semi- structured interview were analyzed descriptively through using qualitative descriptive analysis techniques. The answers to the verbal questions via interview were entered in the interview forms in mind that some students may not write because they attend on preschool education. The main aim in the descriptive analysis is to reach to the concepts and relations which are able to define the collected data (Yildirim and Simsek 2006).

RESULTS

The data analysis steps were explained and interpreted respectively in this section. The information and the responses given by the students were reflected without any change. Only one question was directed to the students in the

semi-structured interview form. The interest areas of the students and the unusual issues in which they are interested were inquired in this question. Some certain categories were described depending on the answers of the gifted and talented children. These categories were written in the Table 1 in detail.

Table 1: Frequency and percentage distribution according to the curious unusual issues and interest areas

Issues	Frequency	%
1-Space and astrobiology	26	68.42
2-Technological advances	15	39.47
3-Interpretation of future	15	39.47
4-Different applications of natural science and mathematics	14	36.84
5-Existence and religion	11	28.94
6-Differents aspects to jobs	10	26.31
7-Different countries and cultures	7	18.42
8-Formation of moral values and personality	6	15.78
9- Different medical applications	6	15.78
10-Legans and abstract history	6	15.78

N=38

The gifted and talented people have more different characteristics than the people showing normal development mentally. One of the characteristic separating and making different the gifted and talented people from the normal ones is the issues in which they wonder depending on their unusualness. The areas of interest and curiosity are very broad in the gifted and talented people (Hany 1995; Jaskon and Klein 1997). Their interest areas focus more on interesting issues than the normal people. We encounter the obligation to provide them training in the frame of their interests when these characteristics of the gifted and talented people are considered. So, it is necessary to examine on which issues the gifted and talented people usually have interests.

The gifted and talented people wondered about such unusual issues as space and astrobiology, technology development, interpretation of future, different applications of natural science and mathematics, existence and religions, different aspects to jobs, different countries and cultures, formation of moral values and personality, different medical applications and legendary and abstract history. The issues which the gifted and talented people wondered were categorized

separately in the study. The students' opinions about these areas were given in detail under the different titles as follows.

Space and Astrobiology

The students in the study group have expressed their opinions about space and astrobiology as follows:

2- *Which living creatures live in space? What is there in outer space? I can't draw a line about such astronomy topics as the universe and space in my mind. I want to live in space. Maybe I can be friend with the ones there.*

4- *Absolutely and absolutely aliens. If there were a life in any other planet then we would be an alien too for them. I can't believe that there are only us 'earthlings' in such a unique universe! I want to research this matter.*

6- *Is there a life in space? How many planets are there in the universe?*

10- *How can people live in space?*

11- *I am very interested in space topics. I want to learn many things about space. I want to go there and build a home in order to examine it. I mean, I wonder space deeply. I hope my dream can become true.*

12- *I want to learn whether there are aliens or not.*

13- *I wonder whether there is life in other planets.*

15- *Does space go forever? Are there aliens? How does universe work? (Especially milky way galaxy)*

16- *Was there another universe before the big bag (formation of universe)? If there isn't gravity in space, how can the other planets remain stable in space?*

18- *I want to learn how all universe formed, the shapes of planets which I don't know, the sizes of all galaxies.*

22- *Are there aliens and will I able to go other planets? Is there a life in the other planets, i.e. except this planet?*

24- *Is there a space science and a life in space? Are there creatures and a life in mars? Briefly, I wonder everything about space. I want to see the secrets of the planets closer.*

25- *Why is there a life in only world? Why isn't a life in space? Or is there a life in space? I wonder how life goes on in space and what there are in planets.*

33- *I wonder space, the existence of the aliens out of the world and how to go to moon.*

35- *Is there a life in space? Is there a life area except world? I want to go to space.*

Technology Development

The students in research group have expressed their opinions about developing technology as follows:

1- *When i grow up, how much will technology develop?*

3- *Technological tools and their intended purpose? Will machine be able to a whole human?*

4- *How was the engine of the plane developed? We can develop the engines which can transfer the earth?*

5- *What are the developing processes of technological tools? What did the human beings use during these processes?*

What idea led to invention of electricity?

7- *I want to research on the derivation of problems which lead people to the exploration and invention and resolving steps.*

23- *How can a computer game be designed for reflected people's own lives? The experiences of people will enable the durability of the game.*

26- *I wonder about the thought process of technological tools.*

34- *Was technological invention actualized spontaneously or with a research process?*

37- *What kind of technological improvements will happen in 2050?*

Interpretation of Future

The students in the research group have expressed their opinions about interpretation of future as follows:

5. *I think i will get a good job.*

7. *In which condition will the university atmosphere which i want to study be?*

9. *I'm making long term and short term plans about my future.*

15. *How will the future come?*

16. *I wonder what i can do in the future.*

17. *Will i be able to share my home with my best friend? Will my family be in better conditions?*

20. *Will my friends and I be able to bring about our dreams?*

22. *What kind of university will i go?*

23. *I wonder about my future very much. I want my dream come true.*

25. *I wonder about my future.*

28. *I wonder about the person i will get married.*

Different Applications of Natural Science and Mathematics

The students in the research group have expressed their opinion about different applications of natural science and mathematics as follows:

1- *Trees' transforming into a paper. Then I can make a web page for IPAD from a tree.*

4- *I'll research on the structure of a brain and how it works. And with the help of this I will design a computer operating system.*

6- *Mathematic helps us to explain many things. How can I express my feelings with numbers?*

12- *I want to use mutation in different fields of study.*

14- *Does vegetation make any difference according to the materials underground? For example, why aren't redbuds purple and green?*

15- *The undecipherable operation of brain?*

16- *Why is mathematic a school subject?*

19- *I wonder about the topics which I can research for humanity?*

26- *I will make big discoveries by researching the history of science.*

38- *I want to carry out more detailed studies which can shape the future.*

Existence and Religion

Students in research group stated their ideas about existence and religion as follows:

2- *What is death like?*

4- *How human come into being exactly? Why human beings are known to have monkey ancestors?*

5- *What would have happened if the earth didn't exist?*

10- *Why are we created? Because Allah doesn't need us. Why do the earth and universe exist?*

13- *Expectations about afterlife and future.*

16- *Heaven, hell, universe and the unknowns.*

18- *If the first human being is Adam, why they didn't believe him and worshipped idols?*

30- *Djinnis and monsters are my field of interest.*

Different Aspects to Jobs

Students in research group stated their ideas about different aspects to jobs as follows:

6- *Authors' feeling while writing a book or what are scientists' thoughts while working.*

8-What kind of power does teaching require? I would like to know how a teacher feels when s/he is inducted because of a student.

9-General description about profession of police which profession I would like to choose.

21-I am curious about the difficulties of other professions.

23-How teachers memorize all they know? That's not normal.

37-I am curious about everything about the profession of teaching.

Different Countries and Cultural Values

Students in research group stated their ideas about different countries and cultural values as follows:

5-The reason why architectural differs according to cities and countries.

7- Legendary continent countries and cities.

11-Going abroad and meet different cultures.

27-How does it feel like living in a different country?

31-Seeing animals in other countries.

37-Travelling in Africa among wild animals.

Moral formation and characteristics of personality students in research group stated their ideas about moral formation and characteristics of personality as follows:

12-Why humans are so selfish?

13-Why humans are so pitiful? When someone kills a person who is actually a bad man, why s/he feels guilty?

27-I am curious about a person's being orphan and getting harm. I wonder what s/he will do. What are the people's thoughts who are dying from starvation?

17- How the bad conditions a person in will be in the future?

Various Medical Applications

Students in research group stated their ideas about various medical applications as follows:

1-I am curious about investigation of dead people and fingerprinting.

2-Changing nuclear gene.

19-Doctors shouldn't make operations. I think everything should be without operation.

27-I will find alternative solutions to operations.

38-I would like to provide different ways to improve the ways doctors treat their patients when I grow up.

Legendary and Abstract History

Students in research group stated their ideas about legendary and abstract history as follows:

13. Who invented myths?

18-Are the legends told in old times true? I would like to live in old times. There must be truths that are not known before.

22-I wonder whether the legends are real or not.

31-I am curious about the mythology. How were this complicated things found.

32-I am curious about the history before the invention of writing.

DISCUSSION

Gifted and talented students, who are different from their coevals, in terms of their various characteristics, gave also different interests as compared with their peers. Gifted and talented students want to learn the issues they wonder in detail and deeply. They focus more on the issues they interested. Davasligil (2004) gifted and talented students' interests in various topics as compared with their peers can be explained with their unusual features.

Their interests centre upon various fields especially based on their own age. Hence, in the study there are some results about abstract concepts such as astrobiology, legends, and spirits. These are not in fact the issues that the students in the pre-school period interest. The most suitable explanation to clarify the result is that gifted and talented students have unusual thought.

They especially concentrate on the topics unknown or they can't clarify in their minds. These question marks increases in the complicated issues especially. Gifted and talented students have the abilities of thinking in a complex way (Caglar 2004b). Their concern increases when the issue compels their thinking abilities.

The most unusual issues are studies on space and astrobiology and this is the explanation of this situation. As the gifted and talented students have no certain findings about the presence of the life on the space, they are interested about this topic. Gifted and talented students are much more interested about the issues about their abilities. (Uzun 2004). Thus, different thoughts about space and living on the space can be explained with only their unusual thoughts.

It is known that gifted and talented students aren't indifferent to change (Akarsu 2004). It is

seen that using technology gives positive results in their education (Gokdere et al. 2004). Today, change in science and technology continues much faster. In the results of the study, it is seen that gifted and talented have some ideas about which opportunities technological change will bring to our life. It is unexpected for the students to think about how to use the technology in the future instead of using to today.

Gifted and talented students can predict (Caglar 2004b; Koksall 2007). They can make an inference about the result of an event considering the other event. Thus, it is apparently seen on the results that they plan about their own future and the issues about human beings. Especially in their inferences, they are interested the issues such as their education, academic development, etc. Which contribute to their own development contrary to personal anxiety which is expected? This can be explained as the reflection of their different ideas on the results.

Gifted and talented students want to improve their abilities and be successful in positive sciences. The primary ones are science and mathematics (Uzun 2004). Students' link the use of science and math for today's basic needs. The gifted and talented, whose ability about math's and number begins at their early ages, use their abilities in order to solve complicated problems (Cutts and Moseley 2001). Gifted and talented students see the connections between different topics and produce new things (Davasligil 2004). In the results of the study, their ideas of using their abilities about science and math on the technological developments.

Gifted and talented students' abilities of thinking abstractly develop faster than normal (Akarsu 2004; Davasligil 2004). In the process of developing their abilities of thinking abstractly, their own potential energy is effective. Gifted and talented children are generally successful thanks to their potential energy and this situation arouses their interests (Clark 2002). Gifted and talented students can think creatively about abstract concepts they don't limit. They have unexpected interrogation and deep interests in religion, existence, etc. Moreover their curiosity about legends and abstract topics of the history are one of the unexpected and intriguing issues.

Gifted and talented students have advanced level of justice. They behave sensitively to the others' rights (Silverman 1993). We can see the marks of this sensitivity on the jobs in the results

of the study. Gifted and talented students have also different abilities a vocationally compared to their non-gifted peers. They can be interested in very different jobs that haven't been heard so far (Caglar 2004b). The jobs they prefer are generally the ones they enjoy doing (Terman 1965)

The topics that the gifted and talented students were interested thanks to their unusual thinking style are mentioned above. With the help of this study the concept of unusualness which did not mention in the previous researched was examined and unusual topics that get attentions of talented children were determined. It was apparently seen that gifted and talented students have unusual point of view and unusual abilities which make them different. Educators should take this point into consideration and use different activities in order to support their unusual interests. Since unusualness, which is a crucial criterion for enhancing creativity, is a developable ability.

A differentiated curriculum should be implemented for the gifted and talented students according to their characteristics and learning pace. Furthermore we know that if teachers can attract a gifted and talented student's attention, they focus on the lesson easily and the lesson will be more entertaining and efficient for them. Due their special characteristics, unusual topics attract them more and attractive topics motivate them to learn. In this sense, an educational program was designed by using unusual topics, can be more applicable and effective for gifted and talented students. Besides that by differentiating curriculum with unusual topic, we foster creativity of students.

REFERENCES

- Akarsu F 2004. *Üstün yetenekliler. Türkiye Üstün Yetenekli Çocuklar Kongresi Seçilmiş Makaleler Kitabı*. İstanbul: Çocuk Vakfı Yayınları No:63.
- Amabile TM 1983. *The Social Psychology of Creativity*. New York: Springer Verlag.
- Baska JV, Stambaugh T 2006. *Comprehensive Curriculum for Gifted Learners*. 3rd Edition. Boston, MA: Perason Education Inc.
- Clark B 2002. *Growing Up Gifted. Developing the Potential of Children At Home and At School*. 5th Edition. New Jersey: Prentice Hall.
- Cutts NE, Mooslesey N 2001. *Üstün zekâli ve yetenekli çocukların eğitimi*. (Çev. İsmail Ersevimi). İstanbul: Özgür Yayınları.
- Caglar D 2004a. *Yaratıcı çocuklar ve yaratıcılığın geliştirilmesi. Türkiye Üstün Yetenekli Çocuklar Kongresi Seçilmiş Makaleler Kitabı*. İstanbul: Çocuk Vakfı Yayınları No:63

- Çağlar D 2004b. Üstün çocukların özellikleri. *Türkiye Üstün Yetenekli Çocuklar Kongresi Seçilmiş Makaleler Kitabı*. İstanbul: Çocuk Vakfı Yayınları No:63.
- Davaslıgil U 2004. Üstün çocuklar. *Türkiye Üstün Yetenekli Çocuklar Kongresi Seçilmiş Makaleler Kitabı*. İstanbul: Çocuk Vakfı Yayınları No:63.
- Gökdero M, Küçük M, Çepni S 2004. Eğitim teknolojilerinin üstün yetenekli öğrencilerin fen eğitiminde kullanımı üzerinde bir çalışma: Bilim sanat merkezleri örnekleme. *The Turkish Online Journal of Educational Technology. TOJET*, 3 (2): 149-157.
- Guilford J P 1967. *The Nature of Human Intelligence*. New York: McGraw-Hill.
- Hany E 1995. Teachers cognitive process of identifying gifted students. In: M Katzko, F Monks (Eds.): *Nurturing Talent Individual Needs and Social Ability*. Netherlands: Van Gorcum.
- Jackson N, Klein E 1997. Gifted performance on young children. In: N Colangelo, G Davis (Eds.): *Handbook of Gifted Education*. 2nd Edition. Boston, MA: Allyn and Bacon.
- Kaufman JC 2009. Creative giftedness beginnings, developments and future promises. In: LV Shavinino (Ed.): *International Handbook of Giftedness*. Springer Science Business Media B.V.
- Koksal A 2007. *Üstün zekâli çocuklarda duygusal zekâyı geliştirmeye donuk program geliştirme çalışması*. İstanbul: Yayınlanmamış Doktora Tezi. İstanbul Üniversitesi Sosyal Bilimler Enstitüsü.
- Matthews DJ, Foster JF 2005. *Being Smart About Gifted Children: A Guidebook for Parents and Educators*. Scotsdale AZ: Great Potential Press.
- Ömeroglu E 2004. Okulöncesi üstün çocuklar ve eğitimi. *Türkiye Üstün Yetenekli Çocuklar Kongresi Seçilmiş Makaleler Kitabı*. İstanbul: Çocuk Vakfı Yayınları No: 63
- Ömeroglu E 2001. Okulöncesi dönemde yaratıcılık eğitimi ve desteklenmesi. *Milli Eğitim Dergisi*, 151: 49-53
- Morris C 2002. *Psikolojiyi anlamak*. (Çev. HB Ayvasik, Sayil M). Ankara: Türk Psikologlar Derneği Yayınları. No. 23.
- Perkins DN 1981. *The Mind's Best Work*. Cambridge, MA: Harvard University Press.
- Renzulli JS 1998. The three-ring conception of giftedness. In: SM Baum, SM Reis, LR Maxfield (Eds.): *Nurturing the Gifts and Talents of Primary Grade Student*. Mansfield Center, CT: Creative Learning Press, pp. 1-27.
- Renzulli JS 1986. The three-ring conception of giftedness: a developmental model for creative productivity. In: RJ Sternberg, JE Davidson (Eds.): *Conceptions of Giftedness*. Cambridge: Cambridge University Press, pp. 53-92.
- Renzulli JS 1978. What makes giftedness? Reexamining a definition. *Phi Delta Kappan*, 60(3): 180-184.
- San I 1979. Yaratıcılık iki düşünme biçimi ve çocuğun yaratıcılık eğitimi. *Eğitim Bilimleri Fakültesi Dergisi*, 12(1-4): 77-190.
- Sak U 2010. *Üstün zekâlılar özellikleri, tanılanmaları, eğitimleri*. Ankara: Maya Akademi Yayınevi.
- Silverman LK 1993. Social developmental model for counseling the gifted. In: LK Silverman (Ed.): *Counseling the Gifted and Talented*. Denver: Co: Love Publishing, pp. 291-327.
- Stenberg R, Grigorenko E 2002. *Dynamic Testing: The Nature and Measurement of Learning Potential*. Cambridge: Cambridge University Press.
- Sternberg R J 1999. A triarchic approach to the understanding and assessment of intelligence in multicultural populations. *Journal of School Psychology*, 37(2): 145-159.
- Terman LM 1916. *The Measurement of Intelligence*. Boston: Houghton Mifflin.
- Terman M 1965. *The Discovery and Encouragement of Exceptional Banbe*. New York: A. C. C.
- Torrance EP 1974. *Torrance Test of Creative Thinking. Verbal Tests forms a and b*. Bensenville: Scholastic Service Inc.
- Torrance EP 1966. *Torrance Test of Creative Thinking. Technical Manual*. Princeton: Personnel Press Inc.
- Yıldırım A, Simsek H 2006. *Sosyal bilimlerde nitel araştırma yöntemleri*. Ankara: Seçkin Yayıncılık.
- Uzun M 2004. *Üstün yetenekli çocuklar el kitabı*. İstanbul: Çocuk Vakfı Yayınları.