

PAPER DETAILS

TITLE: Impact of Digital Media on Gifted Students' Career Choices

AUTHORS: Naif KARA

PAGES: 99-112

ORIGINAL PDF URL: <https://dergipark.org.tr/tr/download/article-file/734774>



Research Article

Impact of Digital Media on Gifted Students' Career Choices

Naif KARA¹

Received: 19 April 2019

Accepted: 11 June 2019

Abstract

This study aims to find out the problems of gifted students, who are educated at Science and Arts Centre (SAC), for their career choices and impact of digital media they use on the choices in the process of 'Special Skills Development Program'. The career choices of gifted students in a digital perspective constitute the basic framework of this research. Semi-structured interviews based on purposive sampling were conducted with a total of 20 students, 10 of whom were girls and 10 boys, who continued their 'Special Skills Development Program' at İzmit Science and Arts Centre in Turkey by using case study from qualitative research approach. In the study, it was concluded that gifted students used digital media to investigate occupations they had previously determined; however the right guidance would be very significant because of their worries through career choices and thus social media literacy would be needed at SAC.

Keywords:

gifted education, digital media, career choice

To cite this article:

Kara, N. (2019). Impact of digital media on gifted students' career choices. *Journal for the Education of Gifted Young Scientists*, 7(2), 99-112. DOI: <http://dx.doi.org/10.17478/jegys.555339>

¹ PhD Candidate, Social Sciences Institute, Communication Sciences, Sakarya University, Sakarya.
E-mail: naifkara80@gmail.com ORCID No: 0000-0001-8899-4211.

Introduction

Increased technology speed has been affecting many areas such as education, professions and management as well as digital media. Turkey has been trying not to lag behind this process by using smart boards as well as tablets and computers in education institutions. By going beyond conventional teaching methods, efforts are being made to explore the way media and communication technologies influence students' career choices (Hoag & Grant & Carpenter, 2017).

Both the gifted education and the social media have become more focused for some researchers in recent years; therefore mass media and personal choice, technology enhanced learning and career goals of gifted students have been researched (Saleem et al. 2014; Young & Nichols, 2017; Culross, 2015). There are some studies on gifted education, the use of social media for gifted students and gifted students' career maturity levels (Ozcan, 2017; Güzel, 2017). The level of career success in a research showed that for females it was greater than males (Hajjat, 2017). Gifted students' career maturity levels through their perceived social support levels with results also showed the fact that gifted students had a high level of professional maturity and change with perceived social support (Bozgeyikli, Doğan and Işıklar, 2010). However, there have been no satisfactory answers to the questions of how and why gifted students use social media. There are a few studies in Turkey that directly contact the subject, apart from Koroğlu's research (2015), in which the use of social media by gifted students is analyzed quantitatively, and the media literacy view of gifted students, by Gömleksiz (2012) and Güzel (2017).

It is worth investigating to what extent gifted students use digital media consciously (Gysbers, 2013). It is evident that the social and emotional aspects of the programs are ignored even though many experts talk about the interaction of the social, cognitive and emotional aspects of the development of the students (Peterson et al. 2009; Wai et al. 2009; Deary et al. 2008). Beyond social interactions the deficiencies have been emphasized in gifted education as teachers at Science and Arts Centre have stated the problems such as lack of student discipline, material and workshops rather than digital media (Karaduman and Ceviz, 2018; Kazu and Şenol, 2012; Sezginsoy, 2007).

As Ikpe and Olise (2010) stated digital media are nevertheless important and they are new communication technologies that bring computers and telecommunication technologies together and are used as channels for dissemination of heterogeneous mass information regardless of time in education. They contribute a new dimension to digital media by adding that digital media is closely related to computer technology and telecommunication technologies. There are various examples of digital media such as the Internet, mobile phones, video conferencing, e-mail, chat rooms, online newspapers, magazines. Digital media is a

term that describes traditional media formats that have been transformed with advances in digital technology and digital calculations (Akhagba, 2014).

While determining the concept of digital media giftedness is also significant to be designated. Some scholars have shared the opinion of giftedness in a solid concept while others have rejected that the intelligence can't be determined and constricted to a certain form. Giftedness is related to intelligence. Binet (1904), one of the earliest working on intelligence, expressed intelligence as the person's ability to adapt himself to circumstances. According to a similar definition, intelligence adapts to what the individual learns or learns from the moment he or she lives (Kaufman and Sternberg, 2008). It has been also focused on gifted children after determining the concept of intelligence. While Tannenbaum (1983) clarified the concept of leadership, one of the most important features of gifted intelligence, he illustrated leadership skills of gifted children with the increase of intelligence level.

The traits of social media usages for gifted students have been illustrated as well. Freeman (2014) has stated the glories of the electronic social media which are exciting to use and hold immense potential for a world of good things. Adapting classroom routines, procedures, and norms of digital technology with positive behaviors in order to provide learning environments for all learners has become very important in terms of improving student performance (Hoag & Grant & Carpenter, 2017). However, the fact that social media is becoming very popular nowadays requires education to be viewed from the perspective of new approaches. For instance, through right guidance of students (Teoh & Quah, 1999) the basic premise is that early intervention based on trustworthiness can improve the performance of the student or reduce the performance of misdirection in special education (Culross, 2015). Accordingly, experts collaborate in the field of education to determine which evidence-based teaching approach best meets the needs of each student (Gosfield, 2011). One of the most important reasons for this collaboration is that students are now hesitantly using the computers that will come to schools in the middle of the 1990's, but nowadays, students now enter the digital world immediately, regardless of what the damage is (Graber & Mendoza, 2012, p.90). From this point of view, social media occupy an important place in education (Young & Nichols, 2017).

It is possible to see that the understanding of cooperative and integrative education can be achieved with digital media. These include: promoting social development and accountability in a loving community where each student is treated fairly and respectfully; creating physical or 'virtual learning environments' that encourage learners' learning, reflecting diversity and encouraging constructive and positive interactions among learners (Littrell, 2011). Establishing and maintaining safe, physical, intellectual and emotional learning environments and creating a rigorous learning environment for all students with high expectations

and appropriate support are also key aspects. In addition to these, it is important to develop high standards and communication for individual and group behavior (Thuketena & Westhof, 2018).

A number of studies have been initiated by using information and communication technologies in Turkey to increase the quality of education. One of these studies is the FATİH-MİOİT (Movement to Increase Opportunities and Improve Technology) project (Akıncı, 2017). The FATİH Project, established in 2010, is a comprehensive and high-budget project and aims to make radical changes in the field of education. In order to restructure the education system, it integrated information and communication technologies with education (Ekici & Yılmaz, 2013, p.318). The project includes not only formal education but also special education.

Different aspects of the concept of digital media have been tried to be introduced. These aspects are more about information dissemination. However, with digital media, the user is also active. We can see the emerging technologies and their use, as well as new methods developed for old technologies in digital media (Young & Nichols, 2017). For instance; Internet newspapers, e-book, digital animation and 3D movies (Bulunmaz, 2011, p.25). These uses are of great importance for gifted education because the gifted students have a pragmatic perspective towards the new media platform and tools and they use time efficiently (Güzel, 2017; Persson, 2009).

The aim of this study is to reveal gifted students' career choices through digital media. It is important in terms of how to make a contribution to the literature when gifted students use social media networks and decide their career choices in digital media. The general purpose of this study is determined on designating the problems which the gifted students encounter in choosing an occupation through digital media. In the study, with the increasing interest in new communication technologies, it is discussed how gifted students use social media and their viewpoints on it. Prior to the interaction of gifted students with social media, the conceptual description of what digital media is and how it is, and what kinds of schools they are studying are the basic views. It is important that awareness of social media should be given to these gifted students who will shape the future of the society.

This study reveals perspectives of gifted students who go to Science and Arts Centres using digital media tools. It makes a significant contribution to the field that is the study on the use of 'digital media' including social media for gifted education. New media literacy will therefore add value to the success of these students concerning digital media. For this purpose, the sub-problems of the study are as follows:

- What are the problems which gifted students encounter for their career choices through digital media?
- Which new media and tools have gifted students been using?
- Why do gifted students use social media?
- How do gifted students benefit from digital media concerning homework?

Method

This study was carried out with semi-structured interview technique through case study in the context of qualitative research approach. The results of qualitative research in-depth studies of small groups are descriptive instead of predictive (Denzin & Lincoln, 2000). The choice of semi-structured interview technique allows flexible answers and detailed answers to be obtained from students. Furthermore, one of the advantages of this technique is that it provides more systematic and comparable information on the grounds that student is going to be based on the pre-prepared interview protocol. Semi-structured interviews have benefited from the analysis of qualitative content in the analysis of research data (Türnüklü, 2000; Yıldırım & Simsek, 2008). The reason why content analysis is preferred is to arrive at concepts and associations that can explain the collected data. The summarized and interpreted data in descriptive analysis are subjected to a deeper process in content analysis, concepts and themes that can't be recognized with the descriptive approach arise as a result of this analysis. The basic process in content analysis is to bring together similar data within the framework of certain concepts and themes and to organize them in a way that readers can understand (Selçuk, Kandemir, Palancı & Dündar, 2014, p.433).

The gifted students were interviewed to determine how well they use new media tools, why they use social media, time period they use on social media, what kind of information they get from the social media and how they benefit from research, lessons, and data on the kind of thoughts of the social media for contributions to their occupational choices. Purposive sampling through criterion has been preferred because gifted students are educated in occupational choices particularly at the program of 'Special Skills Development Program' in Science and Arts Centre. Therefore, the students were chosen from this program. 20 volunteer students were interviewed from 470 students in İzmit Science and Arts Centre. İzmit Science and Arts Centre is preferred because the researcher works there and it has been thought as an advantage that the students would give sincere answers to the questions.

The interview questions have been formed to get open and detailed answers from students to enable clear and efficient interactions. Five advisors, two evaluation specialists and three experts have been consulted for their thoughts following the first draft of the interviews. In particular a pilot study has been

applied to ensure content validity. A pre-application has been conducted with ten volunteer students. Unnecessary items have been removed from the interview form thanks to analyses of the obtained data. Furthermore, alternative dispute resolutions have been made up with three experts in case communication ambiguities happen in the course of interviews.

10 girls and 10 boys were chosen whose ages are 12 and 13, in order to determine whether it varies according to gender. It is envisaged that the study, in which the semi-structured interview technique based on purposive sampling is used through case study in a qualitative approach by listening to the students' interaction with the digital media from their own voices to be able to facilitate the obtaining of systematic data, will contribute to the understanding of the digital media experiences of gifted students, determination of their potential requirements and development of policies in this direction.

Table 1.

Structure of Participants

Participant	Gender and Age	Special Skills Development Program Department
Student 1	Female, 13	Foreign Language
Student 2	Male, 12	Biology
Student 3	Female, 13	Robotic
Student 4	Male, 12	Physics
Student 5	Female, 12	Music
Student 6	Male, 13	Information Technologies
Student 7	Female, 12	History
Student 8	Male, 12	Philosophy
Student 9	Female, 13	Foreign Language
Student 10	Male, 12	Language Arts
Student 11	Female, 12	Mathematics
Student 12	Male, 13	Chemistry
Student 13	Female, 12	Information Technologies
Student 14	Female, 13	Philosophy
Student 15	Male, 13	Biology
Student 16	Male, 12	Language Arts
Student 17	Female, 12	Foreign Language
Student 18	Male, 12	Robotic
Student 19	Female, 13	Physics
Student 20	Male, 13	Visual Arts

The researcher conducted interviews with gifted students at the institution where he worked, prepared the questions and recorded the answers with voice recorder. Moreover, notes are typed and attention to each detail has been made.

The researcher has already held preliminary interviews with the students. He is better acquainted with gifted students because he teaches at İzmit Science and Arts Centre. The flexibility of the researcher was seen as an advantage in terms of validity, because the students were able to be provided more convenient and detailed information through questions. Continuous contact with students, long term observation, sincere responses and voluntary selection of students were considered to be advantageous in terms of reliability and validity of the study.

Data have been presented through the questions used in the interview in *phase 1*. Selective coding messages (Creswell, 2012) were obtained from responses to each question. Then, similar codes have been collected under the same group, and categories have been composed under *phase 2*. Afterwards, in *phase 3*, the findings have been interpreted, and the data have been analyzed as part of the pre-identified codes and themes. Student names haven't been used in this study. It has been coded as S.1, S.2, S.3 and so on.

The data obtained through interviews have been resolved and categorized into themes by three experts and a researcher in the study. They have been evaluated by three different experts in the field so as to ensure consistency between data processors in order to find the reliability of the coding messages used in the research, as well.

Results

In this context, through the uses of the Internet and social media of the gifted students, the findings obtained from the semi-structured interviews are described under the following two main headings in the axis of the study: (1) The Effect of Digital Media on Gifted Students' Occupational Choices, (2) The Entertaining Aspect of Digital Media for Gifted Students' Interactions and Achievements.

The Effect of Digital Media on Gifted Students' Occupational Choices

The common point of the explanations of the digital media experiences of İzmit Science and Arts Centre students interviewed within the scope of the study is that four gifted students used digital media and tools especially for preselected occupations and research purposes.

S.17. I use internet not to search for an occupation. I would like to search the job I want. I want to be a scientist who can speak a lot of foreign languages. I love surfing on the net. But I haven't enough time. I learned Spanish using digital media. Of course, I can speak English. I can learn other languages maybe Portuguese through this media, as well.

S. 20. I'm here to be a good painter. I think I can do it. I love looking the paintings of famous people. I use internet to search for how to be a good painter or something like that.

S. 5. *Music is an important part of life. I use YouTube to play instruments much better than I do. I chose music in İzmit Science and Arts Centre because I want to be a good musician. I don't want to change my decision. Maybe it can be different. I don't know if I choose another occupation. But music should be in my life.*

S. 6. *I use social media or YouTube to learn new things. I like searching. But it should be what I want. I do my homework using internet.*

As seen according to the explanations, gifted students use digital media to search the job they want. There are different thoughts to be explained anyway.

S.1. *I learn different languages here in İzmit Science and Arts Centre. But I do learn sciences in my school. I can change the occupation I want. I sometimes search for other occupations through internet.*

S. 15, S. 8 and S. 7 like their peers who are known to be the most intensive users of the technology, the Internet, social networks, video sharing sites, digital games etc. They would like to be intense users like their friends but they get bored quickly while using too much. They think digital media is very important for their searches. Although it is intertwined with digital media platforms, it is possible to indicate that this study has a tendency to learn the purposes of gifted students through social media uses in 'Special Skills Development Program.'

The Entertaining Aspect of Digital Media for Gifted Students' Interactions and Achievements

Although the statements of the students revealed that they were intertwined with the Internet and digital media at all times throughout the day at school, at home, at the bus stop or school bus, it was seen that each of the student described it as an entertaining activity in social networks. The gifted students do their assignments and can become successful while entertaining. They see digital media as an entertainment tool while doing homework. They also emphasize the importance of digital learning methods rather than classical learning.

S. 2. *I like using internet too much. Of course I know when to stop. I can adjust it. I think that's why my parents allow me to adjust the time. They trust me. I love spending my time using Facebook, Twitter or Instagram. I interact with my friends through the social media. By the way I use Whats.App too much. I contact with my friends on Whats.App, too.*

S.9. *I don't like going to school if I have too much homework. I can learn what teachers tell through internet or YouTube. I learn different things there, too.*

The gifted students enjoy listening to music through YouTube.

S. 3. *I use Whats.App and YouTube specifically. I'm on the phone. I watch videos from channels I follow from YouTube. In Whats.App, I usually use it to chat with my friends to talk about homework. I'm just watching videos on YouTube. I*

listen to music, there are video games. I have not been able to watch it for about 1,5 years. More fun stuff like that. Music and entertainment content.

S. 6. *WhatsApp, Instagram and Twitter through computer, phone, tablet and Internet. I mostly use "WhatsApp.*

S. 13. and S. 18. stated that they used digital media for fun to search for their robotic assignments. It seems that gifted students could do the Lego robot thanks to social media, and it is very helpful in the competitions. When a question arises about a topic, the answer can be found immediately on the Internet. They are advantages for students. It has been determined that all the students can easily find the answers they want through Google. Digital media develops classroom performance for 20 students. Through YouTube, teachers tell the subject and students can follow the lessons in this way. Homework and school lessons are followed by social media.

It has been found that the social media has increased the performances of gifted students mostly in the school, reinforced learning and accelerated the learning process:

S. 8. *I watch people who are teaching on YouTube, I say OK. I am ready to test thanks to them. It works because something is happening and they are doing it in a short time. The teachers at schools teach what they have to teach in two hours; however I can learn it in 20 minutes through digital platform. I am already here, internet again because I already know that it is useful here and it is enough for me.*

S. 16. *There are people as YouTuber. They are shooting videos. Many students watch them about their lessons. It makes a lot of contributions for students. I can learn a subject by watching it on the video. So it can contribute a lot. I can learn what I missed for the lesson at school.*

S. 14. *I mean something that I do not know about. You can learn the video more comfortably. So, for example, you can find a video that is relevant to the topic and watch it, or you can find an example when you do not have a sample when you test it. It means a lot in the sense of reaching it immediately. Let's say you heard a word. It's about a subject you never knew. It is fast in terms of learning what it is. By the way I learn lots of things through my mobile phone. I can't live without it. It is a piece of my life.*

It was detected through interviews that all 20 students entered the Internet with their smartphones as new media tools and mostly used YouTube and WhatsApp. Thanks to the phones on their side, it has been found that they have entered social media networks such as Facebook, Twitter and Instagram. They watch fun video content with YouTube; course, homework and project work, and this social media tool seems to have significantly influenced the success of the lessons. They prefer more WhatsApp to communicate and chat with their friends.

It has been determined that 19 students, except S.1, have been using the Internet search engines for pre-selected occupations. News from social media is followed in order to keep up with current events in society. S.14 considers the smart phone she carries alongside as her own part or as a supporter makes her feel comfortable. There is a common point that digital media affects the achievements of gifted students beneficially because they use the time they spend on digital media efficiently.

Discussion and Conclusion

It has been observed that students use digital media more to have fun, in which they don't know what to look for in particular for their occupational choices. Their profession preferences were observed not to be defined in a certain criterion. It was determined that it caused other problems such as wrong job choices and inaccurate Internet addresses. In addition, it was observed that students' education in different formal education institutions would cause confusion in making the right choice of profession. When the results of this study were compared with another one, it was seen that the level of relationship between the professional maturity levels of the gifted students and the social support perceptions was higher than the relationship between the same characteristics of normal students (Bozgeyikli, Doğan and Işıklar, 2010). The results support the similarities of this study and can be thought that the perceived social support of gifted students has played a greater role in their professional development. However, unlike this study, Hajjat's research (2017) determined that gifted individuals show medium level in functional career success. According to the researcher, this refers to non-successful preparation programs and achieving goals of programs for them generally and considering the philosophy of establishing these programs and what they investigate at first place.

It was concluded that there was no difference for the choices of occupations while using digital media in terms of gender. According to Hajjat's research (2017), it showed that the level of career success for females was greater than males. It has been observed that each student consciously uses social media. Although the differences are not statistically important, it showed bigger effect for programs on girls and their feeling of career success and having profits from offered services in educational programs. Common problems through gender raised problems of career preferences arising from students; were determined as: susceptibility, discipline, level difference, student self-perception irresponsibility and adaptation problem. In addition, teachers at Science and Arts Centre have the problems such as lack of student discipline, material and workshops in 'Special Skills Development Program.' The similar results have been achieved in studies

conducted in the literature (Karaduman and Ceviz, 2018; Kazu and Şenol, 2012; Sezginsoy, 2007).

It has been found that time is of great importance for them and they are trying to use this time efficiently while using social media. Apart from the gifted education, the time of gifted students are quite intense. It seems that social media is very advantageous for them in order to be able to evaluate the time related to the homework and projects in their educational institutions. Therefore, they can do research in a very short time thanks to digital media. They take the advantages of getting all kinds of information easily and in a short time. However, when they spend time on social media, they can't use the time efficiently because of their entertainment content; nevertheless, it is significant that they are aware of this situation. It showed that the keys to make possible especially gifted students' future professional success lie in their training and preparation for a career through right guidance. Teoh and Quah (1999) suggested the same opinion in terms of body of literature.

The gifted students were observed to spend their time listening to music or relaxing on the Internet apart from assignments. They avoid unnecessary interaction in social media content. The same results were reached in some studies, as well (Güzel, 2017; Persson, 2009). This leads them to spend their time efficiently. Hence, they use YouTube channel quite a lot for their assignments and discovering something new. They get more research, homework and project studies on YouTube channel. It has been detected that they can make a lot of progress in their preselected occupations on condition that they have been leaded through right guidance.

The following suggestions can be made to researchers, experts and teachers in order to overcome some problems of career choices experienced in the application of gifted students:

- It can be suggested that the gifted students need to be directed in career choices with proper guidance. It can be provided by enabling them a true new media perspective and launching social media literacy in Science and Arts Centres, Turkey.
- The use of digital media can be taught by the counselors correctly leading to the right professions according to their special skills development.
- The activities can be added in curriculum in 'Special Skills Development Program' at Science and Arts Centre.
- Career counselling services for gifted students can be provided apart from Science and Arts Centre for sustainability.

References

- Akhagba, M. O. (2014). New media technologies and advertising practice in Nigeria, *Estudos em Comunicação*, 17, 277-308.
- Akıncı, M. (2017). English teachers candidates' self-efficacy towards fatih project, *Dicle University Journal of Ziya Gökalp Faculty of Education*, 30, 543-555. DOI: <http://dx.doi.org/10.14582/DUZGEF.1802>.
- Binet, A. (1904). Methodes nouvelles por le diagnostic du niveai intellectuel des anormaux, *L'Ann'ee Psychologique*, 11(1), 191-244.
- Bozgeyikli, H. & Doğan, H. & Işıklar, A. (2010). Üstün yetenekli öğrencilerin mesleki olgunluk düzeyleri ile algıladıkları sosyal destek düzeyleri arasındaki ilişkinin incelenmesi, *Sosyal Bilimler Enstitüsü Dergisi*, 28, 133-149.
- Bulunmaz, B. (2011). Yeni medya eski medyaya karşı: savaşı kim kazandı ya da kim kazanacak? *Karadeniz Teknik Üniversitesi İletişim Araştırmaları Dergisi*, 4(7), 22-29.
- Culross, R.R. (2015). Educating the Ablest: Twenty Years Later, *Journal of Education Issues*, 1(1), 128-134. DOI:10.5296/jei.v1i1.7579
- Creswell, J. W. (2012). Qualitative inquiry and research design: Choosing among five approaches. Sage.
- Deary, I. J., Batty, G. D., Pattie, A., & Gale, C. R. (2008). More Intelligent, More Dependable Children Live Longer A 55-Year Longitudinal Study of a Representative Sample of the Scottish Nation. *Psychological Science*, 19(9), 874-880.
- Denzin NK & Lincoln YS (2000). *Handbook of qualitative research* (2nd ed). Thousand Oaks, CA: Sage.
- Ekici, S. & Yılmaz, B.(2013). Fatih projesi üzerine bir değerlendirme, *Türk Kütüphaneciliği* 27(2), 317-339.
- Freeman, J. (2014). Possible effects of electronic social media on gifted and talented children's intelligence and emotional development, *Gifted Education International*, 32(2), 165-172. DOI: <https://doi.org/10.1177/0261429414557591>.
- Gosfield, M.(2011). Gifted education communicator. *A Journal for Educators and Parents Gifted Education Communicator*, 42 (1), 5-36.
- Gömlüksiz, M.N. & Kan, A.Ü. & Öner, Ü. (2012). Üstün zekâlı ve üstün yetenekli öğrencilerin medya okuryazarlığına ilişkin görüşleri (Elazığ Bilim ve Sanat Merkezi Örneği), *Pegem Eğitim ve Öğretim Dergisi*, 2(4), 41-54.
- Graber, D. & Mendoza, K.(2012). New media literacy education (nmle): a developmental approach. *The National Association for Media Literacy Education's Journal of Media Literacy Education*, 4(1), 82-92.
- Güzel, M. & Kara, N. (2017). Özel Yetenekli Öğrencilerin Yeni Medya Kullanımları ve Akademik Başarılarına Etkisi, *Gençlik Araştırmaları Dergisi*, 5(12), 115-123.
- Gysbers NC 2013. Career-ready students: A goal of comprehensive school counseling programs, *The Career Development Quarterly*, 61(3), 283-288. DOI: <https://doi.org/10.1002/j.2161-0045.2013.00057.x>
- Hajjat, A. T. (2017). The level of career success for talented students and its relation with gender, center and educational level, *International Education Studies*, 10(5), 197. DOI: 10.5539/ies.v10n5p197

- Hoag, A. & Grant, A.E. & Carpenter, S. (2017). Impact of Media on Major Choice: Survey of Communication Undergraduates, *Nacada Journal*, 37(1), 5-14, DOI:10.12930/NACADA-15-040
- Ikpe, E. & Olise, F. (2010). The era of new media technologies and the challenges of media relations practice in nigeria. *Journal of Communication*, 1(2),59-68.
- Kaufman S.B., Sternberg R.J. (2008) Conceptions of Giftedness. In: Pfeiffer S.I. (eds) *Handbook of Giftedness in Children*. Springer, Boston, MA. DOI: https://doi.org/10.1007/978-0-387-74401-8_5
- Karaduman, A.B. & Ceviz, A.E. (2018). Bilim ve sanat merkezi öğretmenlerinin eğitim sürecinde ve yönlendirilmesinde yaşadıkları sorunlar, *Journal of Continuous Vocational Education and Training*, 1(1), 1-17.
- Kazu, İ., Şenol, C. (2012). Üstün yetenekliler eğitim programlarına ilişkin öğretmen görüşleri (Bilsem Örneği), *E-Uluslararası Eğitim Araştırmaları Dergisi*, 3(2), 13-35.
- Köroğlu, İ.Ş. (2015). Üstün yetenekli dijital yerlilerin sosyal medya kullanımları üzerine nicel bir çalışma. *İletişim Kuram ve Araştırma Dergisi*. 40, Bahar, 266-290. E-ISSN: 2147-4524.
- Littrell, B. (2011). Appropriate instruction and intervention for gifted students. *A Journal for Educators and Parents Gifted Education Communicator*, California Association for the Gifted (CAG). 42 (1), 38-42.
- Ozcan, D. (2017). Career decision-making of the gifted and talented, *South African Journal of Education*, 37(4), 1-8. DOI: <http://dx.doi.org/10.15700/saje.v37n4a1521>
- Persson, R.S. (2009). Intellectually gifted individuals' career choices and work satisfaction: a descriptive study, School of Education & Communication, Jonkoping University, Jonkoping, Sweden, *Gifted and Talented International*, 24(1), 11-24.
- Peterson, J., Duncan, N., & Canady, K. (2009). A longitudinal study of negative life events, stress, and school experiences of gifted youth. *Gifted Child Quarterly*, 53(1), 34-49. <http://dx.doi.org/10.1177/0016986208326553>
- Saleem, N. & Hanan, M. A. & Saleem, I. & Shamshad, R. M. (2014). Career Selection: Role of Parent's Profession, Mass Media and Personal Choice, *Bulletin of Education and Research*, 36(2), 25-37.
- Selçuk, Z. & Kandemir, M. & Palancı, M. & Dünder, H. (2014). Eğitim ve bilim dergisinde yayınlanan araştırmaların eğilimleri: İçerik Analizi. *Eğitim ve Bilim*. 39(173), 430-453.
- Sezginsoy, B. (2007). *Bilim ve sanat merkezi uygulamasının değerlendirilmesi*, Balıkesir Üniversitesi, Sosyal Bilimler Enstitüsü, (Yayımlanmamış Yüksek Lisans Tezi), Balıkesir.
- Tannenbaum, A.J. (1983). *Gifted children: psychological and educational perspectives*. New York: Macmillan.
- Teo, C. T., & Quah, L. M. (1999). The knowledge, volition and action programme in Singapore: the effects of an experimental intervention programme on high ability achievement. *High Ability Studies*, 10(1), 23-35.
- Thuketena N. S. & Westhof, L. (2018). Group work during visual art activities to reduce indecisiveness, *South African Journal of Childhood Education*, ISSN: (Online) 2223-7682, (Print) 2223-7674, 1-8.
- Türnüklü A 2000. Eğitimbilim araştırmalarında etkin olarak kullanılabilir nitel bir araştırma tekniği: Görüşme [An effective qualitative research method for educational

- sciences: Interview]. *Kuram ve Uygulamada Eğitim Yönetimi* [Educational Administration: Theory & Practice], 6(24), 543–559.
- Wai, J., Lubinski, D., & Benbow, C. P. (2009). Spatial ability for STEM domains: Aligning over 50 years of cumulative psychological knowledge solidifies its importance. *Journal of Educational Psychology*, 101(4), 817-835. <http://dx.doi.org/10.1037/a0016127>
- Young, S. & Nichols, H. (2017). A reflexive evaluation of technology-enhanced learning, association for learning technology, *Research in Learning Technology*, 25, 1-13. DOI: <https://doi.org/10.25304/rlt.v25.1998>.
- Yıldırım, A.& Şimşek, H. (2008). *Sosyal bilimlerde nitel araştırma yöntemleri*, Ankara: Seçkin Yayıncılık.