An Investigation of Perceptions of Gifted Students toward the Concept of Digital Citizenship

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Abstract
Digital citizenship is an indispensable part of the new world shaped by digital developments and technology, so this study aimed to determine gifted and talented students' perceptions of digital citizenship as a leading key to the path to world citizenship. For this purpose, the qualitative analysis was used through semi-structured interview questions carried out with 40 gifted and talented high school students attending 9, 10, 11, and 12th grades in Science and Art Centers participated in Erzurum province. In addition, content analysis was used in phenomenology to analyze the conclusions of the research. As a result, the first findings, gifted and talented high school students answered the first question are accessed, security, and citizenship; the second findings are socialist, diverse source, rights, education, and virtuality in positive aspect; security, time, diversion, healthy, and belief in negative aspect. The last findings are new laws and security measurements in supporting ways. Given the given categories, there is a need to create security measures, informational applications, and activities based on digital citizenship by means of new education program. Future studies could look at digital literacy, data management, and data security, which influence positive or negative perspectives of gifted and talented students on digital citizenship.
Keywords: *Citizenship, Information technologies, Digital citizenship, Gifted*

Introduction

Various hypotheses have been put forward about the emergence of the concept of nationality. One of them is the claim put forward by Riesenberg. According to Riesenberg (1992), the concept of nationality started with the leader Solon before Christ and continued with the parliamentary developments in Athens. Discussions on increasing the right to representation with Herodotus set an example for democratic mobility (Patterson, 1981; Riesenberg, 1992). In the ancient Greeks, the term citizenship was vague and was identified not only with individual life but also with social life. Indeed, this term is based on the obligations of the individual to the state instead of himself (Hosking, 2005). In particular, Aristotle an important figure of the ancient Greeks claimed that citizenship is participation in the decision-making mechanism (Pocock, 1998). As for the understanding of citizenship of the Romans, citizenship was based on the effort made to ensure the freedom of the state. In this respect, the concept of citizenship of the Romans was separated from the moral necessity of the Ancient Greeks, which was a prerequisite for the concept of citizenship (Ando, 2010). The free people of the new system, which emerged with the weakening of the authoritarian structure in Europe with the

Renaissance, were named citizens. And then, citizenship became a service in which individuals and the state fulfill their obligations (David, 1990; Derek, 2004). This new name leads to today's concept of citizenship.

As for the concept of citizenship in the history of Turkey, the Turkish state tradition stands out. Since there is no serf system based on working under the lords, each individual was considered a free citizen (Kasefoğlu, 1991). Although citizenship corresponds to the concept of subject in the Ottoman Empire, it is called the bond that holds people accountable to the state. The period in which this concept gained importance was the 2nd Constitutional Monarchy (Yayla, 2003). However, the Ottoman Nationality Law came into force in the mid-1800s in order to prevent negative nationalism movements due to capitulation and other external developments and provide to strengthen the idea of Ottomanism (Serbestoğlu, 2014). After the establishment of the Republic of Turkey, legal responsibilities replaced the understanding of citizenship (Baydur, 1998). Today, due to unlimited technological advances, the concept of citizenship has moved to a different dimension than digital citizenship.

Digital citizenship is the community of people who carry out their business through digital tools such as the internet and computers in private and public institutions. The concept of Digital citizenship has been created to meet today's needs of communication and cooperation conducted with the tools that have emerged with technology (Ribble & Park, 2019). Digital citizenship has multiple dimensions. According to Mike Ribble (2008), digital citizenship has nine dimensions: *Digital access, Digital communication, Digital literacy, Digital ethics, Digital laws, Digital rights and responsibilities, Digital Health, Digital security, and Digital commerce.* In order for digital citizenship to be sustainable, it is necessary to have easy internet access, qualified literate, use technological tools effectively, digital media literacy, cyber security, and data management (Sadiku, Tembely & Musa, 2018). For this, digital citizenship should be viewed from a holistic perspective.

The extraordinary rapid development of information technologies and widespread use of information technologies has affected almost every field and changed its vision. For example, according to information technologies in Turkey, the rate of using the internet is about 90%. Due to this rate, many services have started to move toward e-government which is a cruel step for digital citizenship (TUIK, 2021). These developments led to the introduction of services such as the Fatih Project, Eba, and Information and Communication Classrooms in education (Çakır, 2013). These services are important in raising the citizens of the future. Digital

citizenship, digital security, and digital communication taught since the 5th grade were another stage of preparation for digital citizenship (Redcar & Cleveland, 2011; Elçi & Sarı, 2016). Although awareness of digital citizenship is increased with actions, it is not known how much these actions affect gifted and talented students. Gifted and talented people, who have a significant impact on the development of countries' technologies and scientific discoveries, can play a crucial key role in developing the concept of digital citizenship. Although these perform significantly higher than their peers in terms of using information technologies and media literacy, Hawthorne (2020) found out that gifted and talented students have technical and internet connection problems (Üstünel, 2008). After overcoming these problems, it is necessary to prepare gifted students both for digital citizenship and then for world citizenship. Before making it happen, it should be researched what gifted and talented students' feelings and ideas about the concept of digital citizenship. Therefore, determining the views of gifted and talented students on the concept of digital citizenship contribute to information technologies and education programs in gifted education. For this purpose, the following questions were sought:

1. What are the perceptions of gifted and talented students about digital citizenship?
2. What are the evaluations of the gifted and talented students regarding the positive and negative aspects of digital citizenship?
3. What are the opinions of gifted people on ways to support digital citizenship?

Method

The method used in the research was phenomenology, which is used in qualitative research methods. Phenomenology is a method used to reveal the representations and symbols of known or little-known phenomena in the human mind and is an effective method used to describe the common points of perception differences and similarities (Büyüköztürk, Çakmak Kılıç, Akgün, Karadeniz, & Demirel, 2015). In this context, content analysis is used to analyze the descriptions. The content analysis is a categorical approach created by taking and representing the common aspects of perceptions that individuals blend with their experiences and knowledge. It is aimed to increase the understandability and interpretability of the concepts with the themes created under these categories (Yıldırım & Şimşek, 2018). In addition, purposiful sampling was used for the selection of the sample. Purposiful sampling is a sample type chosen to reach data with abundant differences and diversity (Flick, 2014; Marshall & Rossman, 2014). The research questions were delivered to the participants by verbally and in

writting. Participation in the research adhered to the principle of voluntariness. Semi-structured questions were used to determine the views of gifted high school students participating in the research on digital citizenship. Gifted and talented students were coded from ÖYÖ1 (Gifted and Talented Student 1) to ÖYÖ40. In addition, the percentage and frequency range of class level and gender distributions were included.

Participants

Gifted and talented children are described as new era initiators who start the development of innovations in societies and achieve unexpected results compared to their peers (Marland, 1972). To support the education and training activities of gifted and talented students, Science and Art centers were established (BİLSEM). There are some admission requirements in these institutions. The selection of gifted and talented students in Science and Art centers is used group and ability tests in addition to individual tests such as intelligence tests (MEB, 2019).

Table 1

Gender and Grade of Gifted and Talented High School Students

Gender	**F**	**%**
Man	21	52,5
Woman	19	47,5
Grade		
High school 9th	11	27,5
High school 10th	4	10
High school 11th	10	25
High school 12th	15	37,5
Total	40	100

In this study, 40 gifted and talented students attending the 9, 10, 11, and 12th grades of high school from BİLSEM in Erzurum province participated. 21(52.5%) of the participants were male and 19(47.5%) were female, high school 9th grade 11(27.5%), 10th grade 4(10%), 11th grade 10(25%)), 12th grade 15 (37.5%) occurred. Table 1 shows the gender distribution and class levels of the gifted students participating in the research.

Data Collection and Analysis

Before collecting data, it was gotten opinions from three experts who are 1 information technology expert and 2 field experts about semi-structured questions. It made adjustments to questions according to experts' opinions. And then, semi-structured questions were presented to 3 gifted and talented students attending BİLSEM as a pilot study. As a result of the pilot study, it was found that the questions can be answered clearly by gifted and talented students. After the forms were distributed to 40 gifted students, the data were collected verbally and in writing. The accuracy of the data obtained from the two types of recordings was confirmed by the participants for providing to verify the accuracy and the reliability of the data obtained. In addition, the findings were interpreted by adhering to the cause-effect relationship. The aim here is to ensure the validity of the research (Yıldırım & Şimşek, 2003; Büyüköztürk, Kılıç Çakmak, Akgün, Karadeniz, & Demirel, 2015). Obtained data were coded by the researcher. Before coded data for determining categories in content analysis, 2 different researchers recoded the obtained data separately. The percentage of consistency between the observations of the two researchers, the number of items coded in the same way in the two forms, and the number of all items in one form were calculated using the formula P= Na*100/Nt, by revealing similar and different code numbers made by the researchers (Miles & Huberman, 1994). As a result of this calculation, a consistency percentage of 87.1% was found, which revealed the reliability of the data.

Findings

Gifted and talented high school students' Perceptions on Digital Citizenship

In this section, gifted and talented high school students were asked " What are the perceptions of gifted and talented students about digital citizenship?". The categories, code, and frequency values were given in Table 2. As regards Table 2, it is seen that gifted and talented high school students have a perspective on access, security, citizenship, application, social media, source, and time dimensions. In addition, the findings obtained as a result of the opinions and the statements of the participants are below in Table 2.

Tablo 2

The Perceptions of Gifted and Talented Students on Digital Citizenship

Categories	Cod	F
Access	Internet, Wifi, Speedy, Versatility, Communication, Switch, Limitless, Network, Digital	9
Security	Ethics, Violations, Dangerous, Precaution, Protection, Rules, Hacking, Undefined, Laws	9
Citizenship	Citizenship Duty, Right, Responsibility, World Citizenship, Refugee, E-Government	6
Application	New model, Multiple applications, multiple activities, new opportunities, e-government	5
Social Media	Facebook, Instagram, Twitter, whatsapp	4
Source	Multiple sources, diversity of problems, research, exchange of information	4
Time	Time saving, Practical applications, Useful	3
Total		40

ÖYÖ1 "Digital citizenship and responsibilities as it is named"

ÖYÖ5 "Online games come to mind because we can meet and compete with many people"

ÖYÖ10 "We can easily travel to other countries without time and place restrictions or migrate easily, because there are no borders"

ÖYÖ15 "I think about social media concepts such as Facebook and Twitter"

ÖYÖ20 "E-government can be an example of digital citizenship because many government transactions are done there"

ÖYÖ25 "I think of the internet, we have access to all transactions thanks to the internet"

ÖYÖ30 "A new concept that saves time, because everything can be done with one click"

Gifted and Talented High School Students' Perceptions of Positive and Negative Aspects of Digital Citizenship

In this section, gifted and talented high school students were asked "What are the evaluations of the gifted and talented students regarding the positive and negative aspects of digital citizenship?" The categories, code, and frequency values were given in Table 3. According to Table 3, it is seen that gifted and talented high school students have a positive perspective on the digital citizenship as sociality, diverse source, rights, education, and virtuallity. Gifted and talented high school students have a negative perspective on the digital citizenship as security, time, diversion, healthy, and belief. In addition, the findings obtained as a result of the opinions and the statements of the participants are below in Table 3.

Tablo 3

The Evaluations of the Gifted and Talented Students Regarding the Positive and Negative Aspects of Digital Citizenship

	Categories	Cod	F
Positive	**Sociality**	Communication, Interaction, Socialization, Digital Community, Barrier-Free Life	11
	Diverse sources	Document, Book, Document, Web Of Knowledge, Saving Time, Resource, Usefullness	9
	Rights	Freedom, Reliability, Human Rights, Equality, Universality	8
	Education	E-Learning, Distance Education, Unlimited Education	7
	Virtuallity	Reality, Digital Life, Virtual Environment	5
Total			40
Negative	**Security**	Bullying, Violation Of Rights, İrresponsibility, İnterference With Private Life, Violations, Lawlessness, Personal Security, Data Security, Hackers, Unethical Activities,	26
	Time	Useless Time	4
	Diversion	Falsehood	4
	Healthy	Eyes problems, lethargic brain, obesity	4
	Belief	Religious Anxiety	2
Total			40

ÖYÖ6 "If I give an example on the positive side, we can get many things where we sit, even reach everywhere of the world, and saving money and time; If I give an example of its negative side, it is a platform where many harmful things are done through which most of the time is wasted."

ÖYÖ12 "The positive side is that there is access to information in a short time and everyone can access it, negative that is, interference with private life"

ÖYÖ18 "It saves time because going to institutions takes time and we get things done with one click. It provides a barrier-free life. It saves money and reduces paper usage. Moreover, the communication is easy. It provides practicality. A disadvantage is that it may not always be safe because there are many hackers stealing people's private information. It can get out of control because there is no limit, anyone can do anything. Therefore, it does not give much confidence."

ÖYÖ24 "The positive aspect of digital citizenship is e-learning because education does not stop because of pandemics."

ÖYÖ29 "It makes communication easy, but it destroys spiritual relationships and religious feelings because no rule no ethic"

ÖYÖ30 "The positive effects of digital citizenship is a multidimensional environment preventing many other problems such as helping physical disabilities. A negative aspect can affect health like eyes problems if used too much."

ÖYÖ33 "The negative side of this application can remove laws because it is not real and you are always in the digital environment"

ÖYÖ36 "Our information can be easily stolen by hackers with viruses so I don't think that it's safe for using"

ÖYÖ39 "It is beautiful because it provides a barrier-free life, but there is no limit, unrealistic, and giving falsehood information."

Ways to Support Digital Citizenship According to Gifted Students

In this section, gifted and talented high school students were asked " What are the opinions of gifted people on ways to support digital citizenship?" The categories, code, and frequency values were given in Table 4. Gifted and talented high school students emphasized ethical rules, new laws, new regulations, harmonized law with digital life, digital security measures, data management, data security, techinical support, ınformation, lecture, promotion, school events, collaboration, open access, unlimited internet, strong wifi, technological support, promotion, advertising, investment, early education, new educational program. Expressions of gifted students about supporting digital citizenship are given below in Table 4.

Table 4

Perceptions of Gifted Students on Ways to Support Digital Citizenship

Categories	Cod	F
Supporting Ways	Ethical Rules, New Laws, New Regulations, Harmonized Law With Digital Life	12
	Digital Security Measures, Data Management, Data Security, Techinical Support	11
	Information, Lecture, Promotion, School Events, Collaboration	8
	Open Access, Unlimited İnternet, Strong Wifi, Technological Support	4
	Promotion, Advertising, İnvestment	3
	Early Education, New Educational Program	2
Total		40

ÖYÖ3 "Training should be given with a new educational program. Moreover, legal foundations need to be strengthened with new laws."

ÖYÖ4 "Informative activities can be organized in schools."

ÖYÖ7 "Useful advertisements can be made about digital citizenship."

ÖYÖ14 "Internet infrastructures should be developed, for example, wifi and internet can be **free."**

ÖYÖ21 "All students can be taught, for example, small children can be taught with games and we can be taught with lessons because children learn better with games on the computer."

ÖYÖ22 "It should be secure, everyone should not do everything, information should be better protected. It should be controllable, it should be open access to everyone."

ÖYÖ28 "A better introduction should be made so that we can understand it."

ÖYÖ35 "A new digital Program can be developed against digital hackers and new punishment can be put in force for bullies."

ÖYÖ37 "Technological tools and applications should be supported 'n schools."

ÖYÖ40 "There should be digital law and security should be worked on because there are many hackers stealing our information."

Discussion, Conclusion and Recommendations

Discussion

The perception of gifted students on any subject and problem area differs greatly from their peers who are the same age in line with their abilities and characteristics. Therefore, qualitative research is an important method of revealing the harmonies of mental, emotional, and social perceptions of gifted and talented children (Clark, 1997). The children of the new age have become the generation that uses all digital applications and tools most actively. This new generation, which differs from digital immigrants in how it uses technology, is called digital natives (Prensky, 2001). One of the most important representatives of digital natives is gifted students because gifted students show significantly higher performance than their peers in digital literacy and technology use (Sheffield, 2007; Kurnaz, Yurt & Çifçi, 2014). In this respect, gifted and talented high school students can be pioneers in digital citizenship. Internet access is about 90%, internet use for those aged 16 and over is 80%, and e-government usage is around 58% in 2021(TUIK, 2021). Considering the results of TUIK, most of the people in Turkey have internet access. It is a significant factor and enables it to take its place of digital

citizenship in digital life (Anıl & Köksal, 2016). In other words, it is not possible to ensure the development of digital citizenship without technical support.

Considering the security aspect, it is a substantial step in adapting to the digital environment. In particular, security works as a guarantor of the sustainability of digital citizenship. Tekerek and Tekerek (2013) conducted research in educational institutions from primary school to high school and revealed that students encounter problems arising from the lack of sufficient effectiveness and education in terms of data security and security in technological tools. Dönmez (2019) concluded that students have sufficient information security and high digital literacy. Differences in the results of the study reveal that the subject of data security, which is one of the ways to digital citizenship, differs among students. From this point of view, future studies can focus on the reason why students show a different level of data security causing insecurity among students about digital citizenship. Moreover, it is vital to improve data access and security via educational applications in education programs because It is one of the basic conditions for developing the concept of digital citizenship. Bozok, Geniş, and Avcu (2020) tried to teach the ethics of informatics to gifted students by developing digital games. They found that digital games have a positive effect on students' informatics ethics. From this point of view, it can be said that activity-based practices can contribute to informatics ethics. The development of informatics ethics can contribute to the development of digital citizenship levels of gifted students.

Gifted people actively use social media as digital natives. Therefore, they emphasize the social dimension of digital citizenship (Köroğlu, 2015; Elçiçek, Erdemci, & Karal, 2018; Nikolaeva & Kotlıar, 2019). As for the negative aspects of gifted and talented students regarding digital citizenship, Peterson Bain (2011) found that 60% of gifted and talented students were bullied in his study. In addition, this situation has also manifested itself in the digital field where gifted people are more exposed to digital bullying than their peers. As a result, it can cause gifted people to worry about digital security, violations, and rules regarding digital citizenship (Akbıyık & Kestel, 2016; Ağaoğlu; Dönmez, 2019; Öner & Kanıbir, 2020; Tosunoğlu, 2021). İncreasing digital precautions and increasing educational lessons and activities related to digital literacy, information security, information technologies, information ethics, and cyber security in educational programs can support the development of digital citizenship of gifted students.

Compared to their peers, gifted students have higher performance in moral judgments and are more sensitive to rules. The main reason for this sensitivity is that gifted people are digitally literate and follow current news (Tirri, 2014). Therefore, if enough support is given to the gifted and talented students regarding digital education and citizenship, they can be the founders of the new world leader (Siegle, 2004; Sheffield, 2007). In addition, taking the opinions of parents and teachers is significant because parents and teachers carry out educational activities with gifted students. Providing educational support on data management and data security for teachers and parents, the subjects of digital citizenship and digital security can be developed easily in gifted and talented students (Yayla, 2018; Yılmaz, Şahin & Akbulut, 2016; Yerlikaya, 2019), in other words, it is necessary to participate in all education stakeholders in this process. In addition, it is of great importance to reduce the difficulties in technical issues such as internet infrastructure, speed, and free wifi support.

Conlusion

Accordingly, the current study is an important step in terms of revealing the perceptions of gifted people about digital citizenship, which is an application that is increasing in popularity and usage today. In addition to guiding future research, it also is guided the points to be considered regarding digital citizenship in the new education program.

In the first finding, gifted and talented high school students emphasized access, security, and citizenship. As for the Second finding, while the gifted and talented high school students emphasized sociality, diverse sources, rights, education, and virtualization as the positive way of digital citizenship, the negative way of digital citizenship are security, time, diversion, and healthy, and belief. The last finding is about the suggestions of gifted students on how to support digital citizenship. In particular, they emphasized more on supporting the legal infrastructure with new laws and taking new security measures regarding digital life.

Recommendation

1. The most important first condition of digital citizenship is to provide free access. Although internet access is provided nearly everywhere today, there are some problems like economic and infrastructure problems that lead to insufficient access. In addition, providing free Wi-Fi and internet support, especially for students, is of substantial importance in the concept of digital citizenship.
2. İncreasing digital precautions and increasing educational lessons and activities related to digital literacy, information security, information technologies, information ethics,

and cyber security in educational programs can support the development of digital citizenship of gifted students.

3. Providing educational support on data management and data security for teachers and parents, the subjects of digital citizenship and digital security can be developed easily in gifted and talented students.

References

Ağaoğlu, O., Öner, R. B., & Kanıbir, E. (2020). Comparison of specially-talented and non-talented high school students in cyber bullying. *Journal of Science Harmony, 3*(2), 17-32.

Ando, C. (2010). "Citizenship, Roman." *Oxford encyclopedia of ancient Greece and Rome, 2*(1), 147–51.

Anıl, B., & Köksal, E. (2016). Who uses the Internet in Turkey and for what purposes? *Marmara University Journal of Economics and Administrative Sciences, 38*(1), 1-13.

Baydur, M. (1998). Küreselleşme –Yerellik gerilimi ve kimlik dalgası. *Türk Yurdu, 18*(129), 14–17.

Büyüköztürk, Ş., Çakmak Kılıç, E., Akgün, Ö.E., Karadeniz, Ş., & Demirel, F. (2015). *Bilimsel araştırma yöntemleri*. Pegem Akademi.

Clark, B. (1997). *Growing up gifted (5th ed.)*. Upper Saddle River, NJ: Prentice Hall.

Çakır, R. (2013). *Okullarda teknoloji entegrasyonu, teknoloji liderliği ve teknoloji planlaması. K. Çağıltay ve Y. Göktaş (Yay. haz.). Öğretim teknolojilerinin temelleri: teoriler, araştırmalar, eğilimler*. Pegem Akademi.

David, T. (1994). *Citizenship Critical Concepts in Sociology.* Routledge.

Derek, H. (2004). *A brief history of citizenship*. New York University Press.

Dönmez, G. (2019). *Investigation of the relationship between informatıon securıty awareness and digital literacy of high school students* (Master Thesis). Hacettepe University, Institute of Education Sciences, Ankara.

Elçi, A. C., & Sarı, M. (2016). Bilişim teknolojileri ve yazılım dersi öğretim programına yönelik öğrenci görüşlerinin dijital vatandaşlık bağlamında incelenmesi. *Ç.Ü. Sosyal Bilimler Enstitüsü Dergisi, 25*(3), 87-102.

Elçiçek, M., Erdemci, H., & Karal, H. (2018). Examining the relationship between the levels of digital citizenship and social presence for the graduate students having online education. *The Turkish Online Journal of Distance Education, 19*(1), 203-214.

Flick, U. (2014). *An introduction to qualitative research.* Sage.

Hawthorne, S. (2020). *Impact of internet connectıon on gifted students' perceptıons of course qualıty at an online high school* (Doctorate Thesis). Educational Technology Boise State University, USA.

Hosking, G. (2005). *The modern scholar: Epochs of European civilisation: Antiquity to renaissance, Lecture 3: Ancient Greece*. The Modern Scholar via Recorded Books, LCC, United Kingdom, ISBN 1-4025-8360-5. Retrieved from http://www.oxforddictionaries.com/us/definition/americanenglish/citizen.

Kasefoğlu, İ. (1991). *Türk Milli Kültürü*. Boğaziçi Yayınları, İstanbul.

Kestel, M., & Akbıyık, C. (2016). An investigation of effects of cyber bullying on students' academic, social and emotional states. *Mersin University Education Faculty Journal, 12*(3), 844–859.

Kurnaz, Yurt, A. E., & Çiftci, Ü. (2014). An investigation into the views of gifted children on the effects of computer and information technologies on their lives and education. *World Academy of Science, Engineering and Technology International Journal of Information and Communication Engineering, 8*(6), 2025-2030.

Marland, S. P. (1972). *Education of the gifted and talented - Volume 1: Report to the congress of the United States by the U. S. Commissioner Of Education.* Washington, DC: Office of Education (DHEW).

Marshall, C., & Rossman, G. B. (2014). *Designing qualitative research.* Sage.

MEB. (2019). Bilim ve sanat merkezleri yönergesi. *Milli Eğitim Bakanlığı Tebliğler Dergisi, 2747*(82). http://tebligler.meb.gov.tr/index.php/tuem-sayilar/finish/87-2019/5327-2747-aralik-2022.

Miles, M, B., & Huberman, A. M. (1994). *Qualitative data analysis: An expanded Sourcebook*. (2nd ed). Thousand Oaks, CA: Sage.

Nıkolaeva, E., & Kotlıar, P. S. (2019). Developing a digital learning environment as a condition of digital citizenship. *Utopía y Praxis Latinoamericana, 24*(5), 19-24.

Patterson, C. (1981). *Pericles' Citizenship Law of 451/0 B.C*. (pp. 24-25). New York: Arno Press.

Peters, M. P., & Bain, S. K. (2011). Bullying and victimization rates among gifted and high-achieving students. *Journal for the Education of the Gifted, 34*(4), 624-643.

Pocock, J. G. A. (1998): The ideal of citizenship since the classical times. In Gershon Shafir (ed.) (1998): *The Citizenship Debates*. A Reader. University of Minnesota Press. Minneapolis /London.

Prensky, M. (2001). *Digital natives, digital immigrants*. Retrieved from http://www.marcprensky.com/writing

Redcar&Cleveland (2011). *Business and ICT faculty-subject policy for gifted & talented pupils*. http://www.redcarcleveland.gov.uk/main.nsf/Web+Full+List/766475166BA41ABD80256F1D00371821?OpenDocument.

Ribble, M. (2008). Passport to digital citizenship: Learning and leading with technology. *Learning & Leading with Technology, 36*(4), 14-17.

Ribble, M., & Bailey, G. (2007). *Digital citizenship in schools.* Washington D.C.: ISTE.

Ribble, M., & Park, M. (2019). *Digital citizenship handbook for school leaders: Fostering positive interactions online.* International Society for Technology in Education. Portland, Oregon.

Riesenberg, P. (1992). *Citizenship in the western tradition: Plato to Rousseau*. The University of North Carolina Press.

Sadiku, M.N., Tembely, M., & Musa, S.M. (2018). Digital citizenship. *International Journals of Advanced Research in Computer Science and Software Engineering, 8*(5), 18-20.

Serbestoğlu, İ. (2014). *Osmanlı kimdir? Osmanlı Devleti'nde tabiiyet sorunu*. Yeditepe Yayınevi.

Sheffield, C. C. (2007). Technology and the gifted adolescent: Higher order thinking, 21st century literacy, and the digital native. *Meridian, 10*(2), 1-33.

Siegle, D. (2004). The merging of literacy and technology in the 21st Century: A bonus for gifted education. *Gifted Child Today, 27*(2), 32-35.

Tereke, M. & Tereke, A. (2013). A Research on students' information security awareness. *Turkish Journal of Education, 2*(3), 1-10.

Tirri, K. (2014). *The Hacker ethic for gifted scientists. In: Moran, S., Cropley, D., Kaufman, J.C. (eds) The ethics of creativity*. Palgrave Macmillan, London. https://doi.org/10.1057/9781137333544_13

Tosunoğlu, E. (2021). Digital-based practices in teaching specially gifted students: Examining the trends in research made in the last 10 years. *Instructional Technology and Lifelong Learning, 2*(1), 53-74.

Türkiye İstatistik Kurumu (TÜİK), (2021). *Hanehalkı bilişim teknolojileri (BT) kullanım araştırması*. (https://data.tuik.gov.tr/Bulten/Index?p=Hanehalki-Bilisim-Teknolojileri-(BT)-Kullanim-Arastirmasi-2021-37437.

Üstünel, H. (2008). *The effects of gifted students? PC game preferences on their academic achievements* (Master Thesis). Marmara University, Natural and Applied Sciences, İstanbul.

Yayla, A. (2003). *Introduction to political theory*. Liberte Pub.

Yayla, H. G. (2018). *Examınatıon of the information security awareness of teachers assigned to the schools where Fatih Project is implemented and not implemented* (Master Thesis). Ankara University, Institute of Education Sciences.

Yerlikaya, C. (2019). *Examining the awareness of students, teachers, parents and school administrators aimed at information security* (Master Thesis). Ege University, Institute of Education Sciences.

Yıldırım, A., & Şimşek, H. (2003). *Qualitative research methods in the social sciences.* Ankara: Seçkin Yayınevi.

Yıldırım, A., & Şimşek, H. (2018). *Qualitative research methods in the social sciences.* Seçkin.

Yılmaz, E., Şahin, Y. L., & Akbulut, Y. (2016). Digital data security awareness of teachers. *Sakarya University Journal of Education, 6*(2), 26-45.