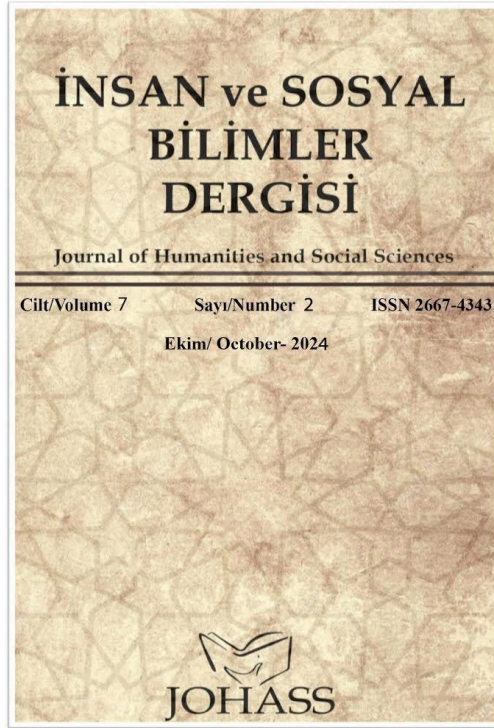


**JOURNAL OF HUMAN AND SOCIAL SCIENCES (JOHASS)**



<https://dergipark.org.tr/tr/pub/johass>

**Social Studies Teachers' Opinions on the Use of Augmented Reality in the Education of Gifted Students\***

*\*This article is derived from the master's thesis titled "Social Studies Teachers' Opinions on the Use of Augmented Reality in the Education of Gifted Students".*

**Duygu AK ÇOBAN<sup>1</sup>**

*Bahçeşehir University Graduate Education Institute, Special Education Department Graduate Student*

*ak.duygu90@gmail.com Orcid ID: 0009-0004-8968-6121*

**Şahin ORUÇ<sup>2</sup>**

*Yıldız Technical University, Faculty of Education, Department of Turkish and Social Sciences Education*

*Prof. Dr.*

*sahinoruc44@hotmail.com*

*Orcid ID: 0000-0001-8666-3654*

**Article Type:** Research Article

Received:08.09.2024

Accepted: 29.10.2024

Published Online: 29.10.2024

**Citation:** Ak-Çoban, D., & Oruç, Ş. (2024). Social studies teachers' opinions on the use of augmented reality in the education of gifted students. *Journal of Human and Social Sciences*, 7(2), 308-322.

## **Social Studies Teachers' Opinions on the Use of Augmented Reality in the Education of Gifted Students**

**Duygu AK ÇOBAN<sup>1</sup>**

*Bahçeşehir University Graduate Education Institute, Special Education Department*

**Şahin ORUÇ<sup>2</sup>**

*Yıldız Technical University, Faculty of Education, Department of Turkish and Social Sciences Education*

---

### **Abstract**

The aim of this study is to reveal social studies teachers' opinions on the use of Augmented Reality in the education of gifted students. As part of the research, a qualitative study was conducted with teachers experienced in the education of gifted and talented students working in BİLSEM and various schools in Istanbul regarding the use of Augmented Reality. Due to the qualitative nature of the study, semi-structured interviews were conducted with 20 Social Studies teachers. The research was conducted within the scope of Social Studies and gifted and talented education during the 2023-2024 academic year. A descriptive content analysis was used to thoroughly examine the data. According to the findings from the interviews, the teachers are knowledgeable about augmented reality. Additionally, the results indicate that the use of augmented reality in the education of gifted and talented students strengthens skills such as permanent learning, capturing attention, increasing motivation, rapid learning, critical and creative thinking, developing perspective, and problem-solving.

**Keywords:** Gifted education, augmented reality, social studies

---

### **Research Article**

*Received: 08.09.2024*  
*Accepted: 29.10.2024*  
*Published online:*  
*29.10.2024*

---

*\*This article is derived from the master's thesis titled "Social Studies Teachers' Opinions on the Use of Augmented Reality in the Education of Gifted Students".*

#### **Corresponding author:**

<sup>1</sup> Graduate Student

*ak.duygu90@gmail.com*

*Orcid ID: 0009-0004-8968-6121*

<sup>2</sup> Prof. Dr.

*sahinoruc44@hotmail.com*

*Orcid ID: 0000-0001-8666-3654*

## **Introduction**

Gifted students exhibit cognitive development distinct from their peers with their quick comprehension, analytical thinking, creativity and strong memory. It is accepted that gifted children have significant physical, mental, social, personality, moral, learning, sensitivity and professional differences from children with normal intelligence (Güçin & Oruç, 2015, 117).

“Gifted children's extreme interest in their environment requires a strong power of observation and reasoning. These children quickly establish connections between seemingly unrelated events and generalize from the clues given” (Özbay, 2019, 35). The social studies course supports students to develop skills in history, culture, geography and social structure. “Social studies, which centers on concepts such as good and responsible citizenship, human and society, adopts an interdisciplinary approach due to its structure” (Kaymakçı & Ata, 2012, 37). Social studies develop critical thinking, analysis and source analysis skills. Gifted students have the potential for success in social studies with these competencies. “It has been stated that the education of gifted children in accordance with their potential will provide a high level of development and benefit to society. However, this will only be possible if gifted children receive education appropriate to their abilities” (Tulum, 2022, 11). “Standard educational environments are not sufficient for gifted children because they have a limiting effect on their potential. In other words, children with these characteristics need to be supported with different educational programs that develop their potential” (Levent, 2011, 26). In this way, these individuals can contribute both to themselves and to society. Tosunoğlu (2021, 54) states that education services for gifted students are generally organized through acceleration, classification and enrichment methods. In addition, the main function of education is to activate the talents of the individual and ensure that these talents are used in appropriate fields (Bozgeyikli & Doğan & Işıklar, 2010, 134).

Gümüşhan and Yel (2023, 145) are of the opinion that educational activities can be more interactive and interesting by integrating technological tools and equipment into the educational environments. In this context, interactive technologies such as augmented reality increase students' positive view and effective participation in the lesson. Augmented reality is a system that integrates digital content into the real world. İçten and Bal (2017, 402), emphasize that augmented reality creates an interactive environment between the digital environment and the real world. “We can define Augmented Reality applications as animated QR codes. It is the reflection of the shape or any object displayed on smartphones as an augmented reality to the

user on the screen by translating it into information, content, surveys or visuals such as photographs and pictures” (Çakal & Eymirli, 2012, 4). Akgün & Üstün (2023, 365) think that teaching with augmented reality technology provides students with authentic learning opportunities. In addition, in order for all these elements to be realized effectively, brains that are suitable for this field are needed. In this context, gifted students and advanced minds in this field are included in the process.

“Augmented reality system supports “situational learning, authentic learning and constructivist learning” approaches in students' lesson activities” (Gümüş & Boydaş, 2021, 325). “However, thanks to the fact that augmented reality technologies allow textbooks, boards in classroom environments and static objects in learning environments to be converted into multimedia possibilities, the functional richness of the environment increases and enables different cognitive channels to work in learning” (Önder, 2016, 1). The efficiency of cognitive channels enables brain processes to function faster and more effectively. Since gifted students have the ability to receive and process more than one information at the same time, their learning processes take place faster than other individuals. In order to develop these abilities, augmented reality environments are offered to these students. These environments are transferred to students by teachers within the framework of specific content, thus aiming to further accelerate the cognitive functioning of gifted students. It is this ability that distinguishes gifted students from other individuals.

Augmented reality is widely used for students today. Experiential learning has always been an important method and learning involving many senses is more effective and permanent. In this respect, augmented reality technology stands out as a developing tool in education (Tosunoğlu, 2021, 58). This study aims to reveal social studies teachers' opinions about the use of augmented reality (AR) technology in the education of gifted students. In addition, the study aims to understand the effects of AR technology on the learning processes of these students and to provide information on how this technology can be used more effectively in education. Since gifted students have different cognitive abilities and learning speeds compared to other students, they require more than standard educational programs. Innovative teaching methods are needed to engage and motivate these students in social studies courses. AR technology is considered as a tool that can maximize the potential of these students by enriching and deepening their learning processes. In this context, knowledge components and orientations reveal the student's overall knowledge network and enable teachers to guide students' learning more efficiently.

The main questions to be addressed in the current study are as follows: What is the level of teachers' relationship with augmented reality technology? How do teachers use and present augmented reality? What is the level of social studies teachers' knowledge about augmented reality? What is the state of application of augmented reality in the field of social studies? To what extent can social studies teachers help gifted students through augmented reality?

In today's world, the role of technology in education is constantly increasing. Especially interactive and innovative technologies such as AR can make significant contributions to the educational life of gifted students. The importance of this study is that it focuses on analyzing the effects of AR technology on gifted students and providing insights on how the technology can be used more effectively in education. At the same time, the study aims to evaluate the effects of AR on the education of gifted students and to provide guidance to educators on how to use this technology in the most efficient way. Finally, this study will examine the role of AR in education in depth, thus aiming to provide valuable contributions to the literature in this field and to support the development of innovative teaching strategies.

## **Method**

### **Model**

In order to examine the opinions of social studies teachers on the use of augmented reality in the education of gifted students, qualitative research method and semi-structured interview form were preferred in the data collection process.

### **Sample and Population**

The population of the study consists of social studies teachers working in Istanbul. The sample consists of 20 randomly selected social studies teachers working with gifted and talented students in secondary schools and BİLSEMs (Science and Art Center) in various districts of Istanbul during the 2023-2024 academic year. These teachers have different levels of experience and age groups and use various educational methods. The distribution of years of professional experience of the social studies teachers who contributed to the study is as follows: 1 teacher with 1-5 years of experience, 14 teachers with 6-15 years of experience, 3 teachers with 16-20 years of experience, and 2 teachers with 21 years or more of experience.

### **Data Collection Tools**

In this study, a semi-structured interview form developed by the researcher was used to collect qualitative data. During the form development phase, research based on the literature was conducted. The form, which consisted of 10 questions in total, was updated in line with the feedback of experts. All questions were grouped under the title of “Interview Questions for Thesis Research on Social Studies Teachers' Use of Augmented Reality in the Education of Gifted Students”.

### **Collection of Data and Analysis**

The teachers participating in the study were informed about the purpose, rationale and scope of the study before the form was applied. A semi-structured interview form was prepared to understand the teachers' perspectives and views on the subject more comprehensively. The information obtained during the interviews was analyzed in detail and in depth using descriptive content analysis and then quantified.

### **Ethical Committee Approval**

This study was prepared as a master's thesis on " Social Studies Teachers' Opinions on the Use of Augmented Reality in the Education of Gifted Students " at Bahcesehir University, Institute of Education Sciences, with the ethics committee decision numbered E-85646034-604.01-85866

## **Findings**

In this part of the study, the information collected from the teachers was analyzed and presented in accordance with the order in the interview form. Some of the participants' opinions are also included.

### **Social Studies Teachers' Opinions on the Use of Augmented Reality in the Education of Gifted Students**

Participants expressed more than one and different opinions in response to this question, “What are the opinions on the use of augmented reality applications for educational purposes?” Among the issues that the participants mainly emphasized are facilitating understanding and learning, concretizing concepts, and creating positive and efficient course content. In addition,

it was stated that augmented reality applications can be effective in areas such as activating students who are far away from the lesson, gaining experience and developing empathy skills.

When the answers to the question “Do you have information about augmented reality (AR) applications? Can you share your thoughts on this field with us?” are analyzed, it is seen that 60% of the participants used the expression “I have information about augmented reality applications”. On the other hand, 30% said “I have little knowledge about Augmented Reality Applications” and 10% said “I have no knowledge about Augmented Reality Applications”. These results reveal that the majority of the participants have a certain level of knowledge about AR technology, but some of them have limited or no knowledge about it. Some of the responses of the teachers through the interview form are as follows:

F10 *“It is a type of experience that enriches the existing reality. This technology is formed by combining the physical elements we perceive around us with computer-generated video, audio and data. It is a reality in which the real and virtual worlds are not completely separated from each other, but on the contrary, become more intertwined.”*

M4 *“Although I have come across a few studies on this field before, I have not personally participated in the studies and conducted a study. It is inevitable that the recently developing technology has spread to every field from social life to education.”*

In response to the question “What are your thoughts on how augmented reality applications can be used in education?”, participants expressed multiple and different opinions. Among the issues that the participants mainly emphasized are facilitating understanding and learning, concretizing concepts, and creating positive and efficient course content. In addition, it was stated that augmented reality applications can be effective in areas such as engaging disengaged students, enhancing experiential learning and developing empathy skills. Some of the responses of the teachers through the interview form are as follows:

F7 *“As augmented reality technology becomes widespread, it will take an active place in educational technologies. In augmented reality applications, students will have the opportunity to develop different skills when they take part as active participants in the augmented reality application design phase according to their levels, and to develop their experience and empathy skills when they experience augmented reality applications.”*

M7 *“I think that by integrating it into the education system, students' social relations will decrease. However, the process of learning academic knowledge will develop faster.”*

How augmented reality applications can affect the motivation of gifted students”, all participants (100%) shared the view that this technology will positively affect the motivation

of students. When the teachers' responses to this question were analyzed, the impact of developing science and technology on students was emphasized. The fact that students are intertwined with technology and can quickly adapt to such innovations has led them to express the opinion that the use of augmented reality (AR) technology, especially in the education of gifted students, will increase their motivation. Some of the responses of the teachers through the interview form are as follows:

F1 *“I believe that augmented reality applications can increase the motivation of gifted students because I observe that these students largely like to interact with technology and try innovative ways of learning.”*

M6 *They will be positively affected. Since gifted students have the ability to understand and comprehend quickly, they can quickly become distracted and bored. By supporting education with augmented reality, students are actively engaged and attention is drawn by presenting different content. This is a factor that increases their motivation.*

How can we use augmented reality technology in social studies courses to support the creativity and critical thinking skills of gifted students? When the answers of the participants to the question are evaluated, it can be said that thanks to augmented reality technology, gifted and talented students develop their creative and critical thinking because they have the chance to propose solutions to social problems, design projects, create new course content and evaluate events from different perspectives. Some of the responses of the teachers through the interview form are as follows:

F4 *“It can be integrated into appropriate units and subjects to develop design and creativity skills such as creating new ideas, problem solving and project development.”*

F7 *“Students who encounter problematic scenarios planned through augmented reality can have the opportunity to develop and criticize more original solution projects against the society and the environment by using the intelligence area they are in regarding the subjects included in the current and active learning area of social studies such as population problem, migration problem, energy use and ecological problems, and have the opportunity to keep themselves in the subject in the most active way.”*

How can we support gifted students to develop their fast-learning potential in social studies course with augmented reality technology? The following main findings regarding the effects of augmented reality (AR) technology on gifted students stand out: AR technology increases students' active participation through learning by doing and experiencing; it also allows them to learn at their individual pace by providing an independent learning environment



and increases the role of students through self-designed content. In addition, it is stated that it enables students to learn the subjects or fine points that they have difficulty in conceptualizing in a practical and fast way. Some of the responses of the teachers through the interview form are as follows:

F1 *AR technology can help gifted students develop their potential for fast learning in social studies. Thanks to this technology, we can create the opportunity to learn more independently at their own pace. We can also create challenging and developmental environments suitable for their learning abilities.*

M4 *Since gifted students have a mind that is open to many stimuli at the same time, they can react better to the stimuli around them with augmented reality technology and produce different opinions and thoughts in these areas. Children will be able to participate more actively and more efficiently as they will be out of their own tempo. This will also increase the efficiency of education for children.*

When you think about the use of augmented reality in the education of gifted students in the social studies course, which subjects do you think you can teach more effectively? Participants indicated that AR technology could be used more effectively in the areas of geography, history, culture, and science and technology. They also stated that AR could be useful in the areas of economic activities and society. These views indicate that AR technology can offer a wide range of applications on different themes and topics in the social studies course. Some of the responses of the teachers through the interview form are as follows:

F8 *“Many subjects in the Social Studies course can be adapted to augmented reality. I especially think that subjects such as climate, economic activities, civilizations can be taught more effectively and permanently. It can be used in intercultural interaction subjects, historical subjects, geography subjects.*

What are the advantages of augmented reality applications for gifted students?”, it was determined that the advantages of using this technology are mostly in the direction of active learning, motivation, creative thinking, fast learning and entertainment. At the same time, teachers stated that augmented reality offers advantages such as versatile learning, critical thinking, problem solving, in-depth understanding, efficient learning, learning by doing-living, increasing imagination, using technology, school adaptation, classroom management, concretization, simulation, permanent learning, curiosity and visual learning.

Some of the responses of the teachers through the interview form are as follows:

F9 *“Topics can be made engaging, in-depth understanding can be ensured, the learning experience can be personalized according to the student's own pace and preferences, and an interactive learning experience can be offered.”*

M4 *“In general, these children learn quickly in the classroom but also become bored quickly leading to disengagement. Technological developments that include a lot of stimuli such as augmented reality will allow children to participate more efficiently in the lesson and get higher efficiency from the lesson. Producing original content will enable them to produce realistic approaches to events that are difficult and difficult to encounter in life.”*

In response to the question “What do you think about the potential risks and limitations that gifted students may experience when using augmented reality?”, participants expressed multiple and different opinions. The participants mainly emphasized addiction, distraction and technical problems. In addition, opinions such as not being able to distinguish reality from virtual, distancing from group work, going beyond the acquisition, classroom noise, distraction, not following the rules, cost, and not being able to socialize attracted attention.

Some of the responses of the teachers through the interview form are as follows:

F11 *“They can get bored the rest of the time because they will learn fast. They usually get bored quickly from the subjects they learn fast, they can get distracted.”*

M1 *“The dangers of overuse, overachievement and cyberspace.”*

What kind of resources or trainings are needed for teachers to use this technology effectively? When the answers to the question were evaluated, most of the participants emphasized the need for in-service trainings on augmented reality technology and stated that the need for resources related to this technology is important. Some of the responses of the teachers through the interview form are as follows:

F1 *“Teachers will definitely need technical trainings to use this technology effectively. I think they may also need pedagogical guidance on the use of AR technologies. They will also need resources to access AR content.”*

F3 *“In-service trainings can be provided. However, these trainings should be composed not only of theoretical content but also of content that allows for practice.”*

When the answers to the question “Is there any point you would like to add about the use of augmented reality applications in education?” were analyzed, it was seen that 60% of the participants answered this question. When the opinions were evaluated, it was stated that teachers want to use augmented reality actively in the classroom, and that sharing examples of

*activities implemented through encouraging activities will contribute to the effective use of this technology. Some of the responses of the teachers through the interview form are as follows:*

F5 *“I think that using augmented reality in education can align with 21<sup>st</sup>-century standards and provide an opportunity to develop a different educational method. However, I believe that making this approach popular should not be solely focused on teachers’ own professional development. I think it would be beneficial for the Ministry of National Education to easily integrate augmented reality applications into the curriculum and facilitate access to students.”*

M6 *“Since education will take place interactively, studies supported by the Ministry of National Education should be carried out for its active use. In our technologically advanced age, augmented reality should be used effectively in lessons.”*

## **Discussion and Result**

When the answers given by the teachers through the interview form were evaluated, it was seen that the same opinions were expressed that AR technology would provide permanent learning for gifted students, increase motivation, strengthen fast learning, provide remarkable and enjoyable course content, facilitate comprehension, and encourage learning by doing and experiencing different experiences.

When the process is analyzed, in the light of the data obtained, according to the results obtained within the scope of this study, teachers have knowledge about AR, but very few of them have attended a seminar or received a training in this field. The use of augmented reality, which is considered as a reflection of developing technology, is considered as an element that increases the motivation of gifted students by supporting their multifaceted development.

According to the participant teachers, AR technology can be used in every unit of the Social Studies course. In addition, it was seen that AR technology can be utilized in different subjects such as history, geography, economy, citizenship awareness, science and social structure. It was determined that augmented reality contributed to the rapid learning of gifted students, and it was concluded that it could create the opportunity for gifted students to learn more independently at their own pace, as well as create challenging and developmental environments suitable for their learning abilities.

Francesca Baccassino and Stefania Pinnelli (2023), while emphasizing the need for the development of classroom-wide, prosocial models of education to support gifted students, also

point to the importance of developing holistic approaches to meet students' basic needs such as social recognition and emotional support. A comprehensive model of technology can play an active role in meeting such needs. Özden Çınar (2022), in her study with gifted students, stated that augmented reality has positive effects on the learning process such as providing permanent learning, eliminating the monotony of the lesson and providing easier understanding. Despina Dimitriadou, Neslisah Emin, Parthena- Marina Kiremitsidou and Stavroula Mpouzou (2024) emphasized that education for gifted students includes programs and support systems to meet their specific learning needs and that the effective integration of technologies offers significant opportunities for digital age readiness by promoting personalized learning. Del Siegle (2018) stated that virtual and augmented reality technologies expand the learning opportunities of gifted students and offer them safe learning experiences, and that the use of these technologies, which are still in the developmental stage, is rapidly increasing for educational purposes and offers more opportunities. In this study, it was revealed that not only the students but also the Social Studies teachers who teach gifted students shared this view. Dr. Purificacion Toledo-Morales and Dr. Jose Manuel Sanchez-Garcia (2018) emphasized that augmented reality (AR) applications significantly improved students' academic performance and motivation to learn, but technical infrastructure, special materials and software support for teachers should be provided for augmented reality technology to become an effective tool in education. Değirmenci and İnel (2022), suggest that in order to increase the use and impact of augmented reality (AR) technology in education, in-service trainings should be provided and AR teaching should be added as a course. Dan Roy and Iulian Radu (2021) emphasize the importance of teachers and designers keeping pace with rapidly evolving immersive learning technologies. They suggest that teachers should take a leading role in their organizations or seek collaboration in this process, while content designers have the opportunity to create innovative learning content that will gain traction. The current findings reveal that teachers do not receive sufficient training on this subject; however, when asked for their suggestions, they demanded training on AR. Özgürbüz (2023), examined the views of pre-service Social Studies teachers and found that mobile augmented reality technology supported geography subjects both visually and aurally and provided a realistic and interactive learning environment, which positively affected their motivation. According to the current findings of the study, participant teachers also share that it would be appropriate to use AR technology in geography.

According to the participant teachers, the use of AR technology in the education of gifted students has advantages as well as limitations and risks. While the active use of this

technology in the lesson is considered to be an advantage in that it encourages permanent learning, plays a role in the concretization of the subject, is attention-grabbing, supports the level of comprehension and perception, makes the learning process fun, strengthens creative and critical thinking skills, provides in-depth learning, and offers a rich and versatile experience, it is also concluded that there are risks such as technical problems, addiction risk, and distraction. However, when the opinions were analyzed, it was concluded that the majority of the teachers agreed that using AR technology has more advantages than risks.

### **Recommendation**

- In order to fully exploit the potential of augmented technology, teachers should be given the opportunity to receive training in this area, with an emphasis on the integration of AR technology into education. During this training, attention should be paid to understanding and planning the pedagogical component of AR technology for gifted students.
- Sample applications can be made on the effective and qualified use of augmented reality technology in the education of gifted students and encouraging studies can be directed.
- Studies and guidelines supported by the Ministry of National Education on the use of AR technology in the education of gifted students can be created to guide educators during implementation.

### **Ethical Committee Approval**

This study was prepared as a master's thesis on " Social Studies Teachers' Opinions on the Use of Augmented Reality in the Education of Gifted Students " at Bahcesehir University, Institute of Education Sciences, with the ethics committee decision numbered E-85646034-604.01-85866

## References

- Akgün, E. & Ustun, A. B. (2023). Content analysis for learning with mobile augmented reality. *Dokuz Eylül Üniversitesi Buca Eğitim Fakültesi Dergisi*, (56), 362-383.
- Baccassino, F. & Pinnelli, S. (2023). Giftedness and gifted education: a systematic literature review. *Frontiers Education* 7:1073007.
- Baltacı, A. (2019). The qualitative research process: how to conduct a qualitative research? *Ahi Evran Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 5(2), 368-388.
- Bozgeyikli, H., Doğan, H., & Işıklar, A. (2010). Examination of the relationship between gifted students' career maturity levels and their perceived social support levels. *Erciyes Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 1(28), 133-149.
- Çakal, M. A. & Eymirli E. B. (2012). *Artırılmış gerçeklik teknolojisi*. Kuzey Anadolu Kalkınma Ajansı.
- Dimitriadou D, Neslisah Emin, Kiremitsidou, N. P. & Mpouzou, S. (2024). The education of gifted students in Greece and Europe and the use of ICT. *GSC Advanced Research and Reviews*, 18(03), 124–141. <https://doi.org/10.30574/gscarr.2024.18.3.0086>
- Güçin, G. & Oruç, Ş. (2015). Evaluation of academic studies on gifted and talented children in turkey in terms of various variables. *Adıyaman University Journal of Educational Sciences*, 5(2), 113-135.
- Gümüş, K. & Boydaş O. (2021). Artırılmış gerçeklik uygulamalarının eğitimdeki yerinin incelenmesi. *Uluslararası Sosyal Araştırmalar Dergisi*, 14(76), 321-330.  
<https://education.mit.edu/wp-content/uploads/2021/08/Learning-Across-Realities.pdf>  
[https://kudaka.ka.gov.tr/assets/upload/dosyalar/fa254-artirilmis\\_gerceklik\\_teknolojisi.pdf](https://kudaka.ka.gov.tr/assets/upload/dosyalar/fa254-artirilmis_gerceklik_teknolojisi.pdf)
- İçten, T. & Bal, G. (2017). A content analysis of the academic works on the augmented reality technology. *Bilişim Teknolojileri Dergisi*, 10(4), 401-415.
- Kaymakçı, S. & Ata, B. (2012). Social studies teachers' perceptions about the nature of social studies. *Journal of Social Studies Education Research*, 3(1), 35-64.  
<https://doi.org/10.17499/jsser.33721>
- Levent, F. (2011). *A study of the views and policies on gifted education* [Yayınlanmış doktora tezi]. Marmara Üniversitesi.
- Özbay, Y. (2019) *Üstün yetenekli çocuklar ve aileleri*. Aile Çalışma ve Sosyal Hizmetler Bakanlığı.

- Özden Çınar, T. (2022). *Attitudes of gifted students towards augmented reality and their opinions about augmented reality applications in social studies courses*. [Yayınlanmış doktora tezi]. Afyon Kocatepe Üniversitesi.
- Özgürbüz, İ. E. (2023). *Mobil artırılmış gerçeklik uygulamalarının sosyal bilgiler öğretmen adaylarının coğrafya derslerindeki akademik başarıları ile bilişsel yüklerine etkisi* [Yayınlanmış doktora tezi]. Atatürk Üniversitesi.
- Polat, A. (2022). Semi-structured interview questions in qualitative research: question forms and types, qualities and order. *Anadolu Üniversitesi Sosyal Bilimler Dergisi*, 22(Özel Sayı 2), 161-182.
- Roy, D. & Radu, I. (2021). *Learning Across Realities: Virtual and Augmented Reality in Education*. The Education Arcade.
- Siegle, D. (2019). Seeing is believing: using virtual and augmented reality to enhance student learning. *Gifted Child Today*, 42(1), 46-52.
- Sönmez Gümüşhan, Y. & Yel, S. (2023). A review on the development of thinking skills using augmented reality technology. *Kapadokya Eğitim Dergisi*, 4(2), 144-157.
- Toledo-morales, P. & Sanchez-garcia, J. M. (2018). Use of augmented reality in social sciences as educational resource. *Turkish Online Journal of Distance Education*, 19(3), 38-52.
- 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.
- Tulum A. (2022). *Teoriden uygulamaya özel yetenekli çocuklar*. İksad Yayınevi.