



## DIGITAL GAMES AND THEIR EFFECTS ON CHILDREN

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### **Abstract**

*Nowadays, alongside the development and widespread use of technology, the concept of the "digital game" has emerged. With easier access to technology, the popularity of digital games among children is increasing. Digital games appear in various forms such as console games, PC games, and online games. Besides these, it is seen that digital games are also played with portable technologies such as mobile phones and tablets. With these developments, children's play equipment, play habits and play perceptions have also changed. Hence, digital games have an important effect on children. These games, which attract children's attention, alongside their benefits, bring certain dangers and problems as well. Therefore, questioning the positive and negative effects of digital games on children has also emerged. The definition and types of digital games, the effects that digital games have on children in early childhood were discussed in this study. Studies on this subject have been obtained and a literature review has been made by examining the studies published in various sources.*

**Keywords:** Child, game, digital game.



## DİJİTAL OYUNLAR VE ÇOCUKLAR ÜZERİNDEKİ ETKİLERİ

### Öz

*Günümüzde teknolojinin gelişmesiyle ve yaygınlaşmasına paralel olarak “dijital oyun” kavramı ortaya çıkmıştır. Teknolojiye erişimin kolaylaşmasıyla birlikte dijital oyunların çocuklar arasında popülerliği artmaktadır. Dijital oyunlar, konsol oyunları, PC oyunları ve çevrim içi (online) oyunlar olarak farklı şekillerde karşımıza çıkmaktadır. Bunların yanı sıra dijital oyunların cep telefonu ve tablet gibi taşınabilir teknolojiler ile de oynandığı görülmektedir. Bu gelişmeler ile birlikte çocukların oyun araç gereçleri, oyun oynama alışkanlıkları ve oyun algıları da değişim göstermiştir. Bu sebeple dijital oyunlar çocuklar üzerinde önemli bir etkiye sahiptir. Çocukların ilgisini çeken bu oyunlar, yararları kadar tehlikeleri ve sorunları da beraberinde getirmektedir. Bu nedenle dijital oyunların çocuklar üzerindeki olumlu ve olumsuz etkilerinin sorgulanması gerekliliği ortaya çıkmıştır. Bu çalışmada dijital oyunların tanımı, türleri, dijital oyunların erken çocukluk dönemindeki çocuklar üzerindeki etkileri ele alınmıştır. Buna yönelik yapılan araştırmalar elde edilmiş, çeşitli kaynaklarda yayınlanmış araştırmalar incelenerek literatür taraması yapılmıştır.*

**Anahtar Kelimeler:** Çocuk, oyun, dijital oyun.

### 1. INTRODUCTION

Playing games is important in terms of development in early childhood. Through playing games, children both express themselves and consume their extra energy. Simultaneously, in terms of social and linguistic development, games enable children to communicate with their friends (Horzum, 2011). Playing games helps children to reveal and develop their creativity. Playing has a significant impact on making the child's learning process more fun and permanent (Ocelan, 2019). Games that support the cognitive development of the child contribute to the child's decision-making and problem-solving skills

(Horzum, 2011). Games have an active role in the assimilation of stimuli, cognitive abilities, and patterns from the outside world (Demirhan Sayin, 2016). Children try to understand the world by expressing emotions such as anger, happiness, and sadness through games (Landreth, Homeyer & Morrison, 2006). Playing, which is a part of the child's life, also represents a way of expressing himself/herself more clearly. In addition, playing games serves the child's sense of achievement, and thus the child learns to enjoy this sense of accomplishment.

Games, that were played in different ways and had various purposes throughout the human history, are one of the inseparable parts of life. Before a digital world, when the word game was mentioned, what came to mind was running, jumping, catching, games played with a ball or stone, playing with paper and pencil, and games that had a purpose (Goksen, 2014). With the first digital adaptations of traditional games, the concept of game has also started to acquire new meanings (Sezen, 2011). Digital games have entered our lives as a result of the increase in the memory and processing capacities of computers. Children playing with their friends on the street or in the park in the past years, with the rapid progress of technology (mobile phone, computer and tablet), nowadays play digital games with virtual people indoors (Horzum et al, 2008). People at a younger age are introduced to digital games, and there are more than one billion people in the world who play digital games (Dinc, 2012; Oner, 2020).

The place that technology occupies in our lives is indispensable. Children are inevitably affected by technological developments. Along with these developments, children's playing equipment, playing habits, and game perceptions have also changed (Yigit, 2019). With the change in the perception of the game and playing, the place of toys has been taken by electronic devices

such as mobile phones and tablets. In fact, children who do not feel the need for the toys in real life play games with these toys in the digital environment. (Ozsoy & Atilgan, 2018). Nowadays, the popularity of digital games among children and young people around the globe is growing (Deng et al, 2015).

When the literature is reviewed, it is seen that digital games contribute to mental development (Tarhan, 2007), that the time spent playing digital games has a minor effect on the academic achievement of adolescents (Drummond & Sauer 2014), that digital games are not only a tool for gaining academic knowledge, but also a significant tool for gaining skills such as planning, goal setting, building strategy, and critical thinking (Bozkurt, 2014). In addition, it is seen that the attitudes of those who have a habit of playing digital games in daily life are more positive regarding the use of digital games in education (Noraddin & Kian 2014), and that digital games have a positive effect on students' skills and creativity (Hsiao et al., 2014).

The fact that situations such as war, violence and crime are portrayed as a part of life in digital games triggers negative effects on children and young people such as insensitivity, hostility and deceit (Muslu & Bolisik, 2009), and that antisocial aggression increases as the duration of children playing computer games increases (Aydin & Horzum, 2015; Bilgi, 2005; Burak, 2013).

It is stated that these games, which fall under the addiction category, cause the players not to be able to leave the game and distinguish between the game and real life, and not to fulfill their responsibilities (Horzum, 2011), lead to low self-esteem (Demirli & Aydiner, 2017), cause social or emotional problems, and increase the aggressive behavior (Anderson et al., 2010; Erboy, Akar & Vural, 2010; Evcin, 2010; Lemmens et al., 2009). It is also noted that the emotion regulation strategy of people is seen as the trigger of digital game addiction (Wolfling et al., 2008).

It is seen that the studies on the use of digital games in education are in the fields of mathematics, science, social studies, and language teaching (Bakar, Tuzun & agiltay, 2008; Bayat, Kilicaslan & Senturk, 2014; Bozkurt, 2014; Cankaya & Karamete, 2008; Firat, 2011; Karamustafaoglu & Kaya, 2013; Kaya & Elgun, 2015; Malta, 2010; Peirce, 2013; Tasdemir & Suyun, 2016; Yagiz, 2007; Yigit, 2007; Yurt, 2007). It has been reported that children's route planning strategies can develop through playing digital games (Lin & Houb, 2016).

Erken ocukluk doneminde oyun, ocuęun temel gereksinimlerindedir. ocuęun geliřimi aısından oyun ve oyuncaklar vazgeilmez unsurlardır (Bekmezci & zkan, 2015). Gunumuzde teknolojik geliřmeler, ocukların oyun oynama alışkanlıklarını da deęiřtirmiřtir. Bilgisayarlar, mobil cihazlarda oynanan evrimii ya da evrimdışı elektronik oyunlar ve video oyun konsolları ile oynanan oyunlar, dijital oyun olarak kullanılmaktadır (Iřıkoglu Erdoęan, 2019). aęımızda dijital oyunlar, ocukların yařamında nemli bir yer tutmaktadır. Arařtırmalar dijital oyunların etkileri ve bu oyunların ocuklara en iyi nasıl hizmet edeceęi konularına yonelmektedir (Lieberman et al., 2009). ocukların yařamında saęlıklı geliřimi desteklemek iin dijital oyunların ocuklar zerindeki etkilerinin arařtırılmasını nemli hale getirmektedir. Bu nedenle alıřmanın amacı, dijital oyunların ocukların zerinde olumlu ve olumsuz etkilerini arařtırmaktır.

Play in early childhood is one of the basic needs of the child. Games and toys are indispensable elements for the development of the child (Bekmezci & zkan, 2015). Today, technological developments have also changed the playing habits of children. Online or offline electronic games played on computers, mobile devices, and games played with video game consoles are used as digital games (Iřıkoglu Erdoęan, 2019). In our age, digital games have an important place in the lives of children. Research focuses on the effects of

digital games and how these games can best serve children (Lieberman et al., 2009). It makes it important to investigate the effects of digital games on children in order to support healthy development in children's lives. Therefore, the aim of the study is to investigate the positive and negative effects of digital games on children.

### ***Digital Games***

Digital games, which have been in our lives since the 1970s, have begun to be played by large masses in a short period of time (Bozkurt, 2014; Yalcin Irmak & Erdogan, 2016). Nowadays, digital games are played by children, teenagers, and adults for entertainment and for spending their free time (Horzum, Ayas & Cakir Balta, 2008). Digital games are programmed with various advanced technologies and they are offered to users through various display techniques and platforms (Cetin, 2013; Ozhan, 2011). Also, a digital game is defined as a set of systems with goals and rules, in which interaction with computer software occurs through a monitor, keyboard, and mouse (Kayali, 2011; Ozdemir, Sancar & Kuzu, 2019).

When we take a look at the historical evolution of digital games, we can see that it dates back to multipixel games like Pacman and Pong. Atari company, a company in the USA, developed the game called "Pong" in 1972 (Gentile & Anderson, 2006). These two games reached a large volume of sales in those years in America (Provenzo, 1991). Turkish people, who were introduced to digital games in the early 1980s, also spared time and money by making these games a part of their daily life (Yilmaz and Cagiltay, 2005). Arcade (coin-op) games were widely used in game rooms in the 1980s. In the ensuing years, as home games became widespread, these games were replaced by game consoles, computers games, or mobile devices games over time (Bayindir & Misirli, 2020).

Since there are multiple themes in digital games, different classifications have appeared. Classification of these games can be made according to themes, the way the games are played, and the number of players (Eni, 2017). Digital games are classified as console games, computer games and online games. When it comes to thematic and technological features, they are divided into action, adventure, fighting, riddle, racing, role-playing, simulation, logic, intelligence, entertainment, and sports games (Demir & Sahin, 2019; Gurcan et al., 2008). According to the number of players, they are classified as single-player or multi-player games (Kaya, 2013).

Digital games are one of the rapidly developing fields of information technology. The companies producing these games are releasing different games day by day, aiming to reach more users (Orhan, 2018). Nowadays, these games draw the attention of people from all ages (Irmak & Erdogan, 2016). In addition, depressed people may see playing digital games as a way to alleviate their negative emotions. This situation can lead to excessive digital gaming and even digital gaming addiction (Kılıc, 2021). For this reason, the prolongation of the games played in technological tools may cause a decrease in the number of face-to-face games played with children's friends and an increase in the games played alone (Rosen et al., 2014).

### ***The Effects of Digital Games on Children***

Nowadays, as a result of technological developments, electronic devices are easily accessible (Lieberman, Fisk & Biely, 2009). These developments cause children to spend a significant part of their days in the virtual world playing digital games (Erboy, 2010). Digital games are also seen as a way of relaxation and entertainment. However, this does not mean that there are positive effects of digital games on children. These games, which attract children's attention, alongside their benefits, bring certain dangers and problems as well. Therefore,

questioning the positive and negative effects of digital games on children has also emerged (Ferguson, 2007).

### ***Positive Effects of Digital Games on Children***

The conscious and controlled use of digital games contributes to children's areas of development (Irmak & Erdogan, 2016). Some studies conducted have indicated that computer games contribute to mental development. It has been revealed that some of the games stimulate mental skills and provide concentration for a long time (Cakir, 2013; Tarhan, 2007). Scientists from the National Aeronautics and Space Administration have also stated that computer games improve attention and concentration in children and young people (Tarhan & Nurmedow, 2011). In addition, while playing digital games, children improve their decision-making and problem-solving skills, and playing helps develop short-term memory (Kars, 2010; Tuzun, 2006). Particularly, distractibility, comprehension, perception, reasoning, and visual skills can be improved through these games. Digital games can be used to help reduce the typical characteristics of children with hyperactivity problems such as impatience and impetuosity, and to teach them not to give up in potential situations (Tarhan, 2007).

Digital games contribute to the development of logic, creativity, motor, and sensory skills (Cojocariu & Boghian, 2014). Also, digital games contribute to the development of attention focus and hand-eye coordination (Kim & Smith, 2017). The competitive environment in which digital games are played offers opportunities for children to develop winning strategies. Thus, it is remarked that the feelings of success and winning contribute to the increase of children's self-confidence and the ability to cope with real-world problems (Bayirtepe and Tuzun, 2007; Gunawardhana & Palaniappan, 2015; McLean & Griffiths, 2013). Moreover, in digital games, bonds and friendships are established between the



players who communicate with each other. In the digital world, game networks can be environments with intense social interaction (Erdem, 2019). At the same time, the children's interaction in the social environment that digital games create is not only about the game. Sharing experiences and knowledge about life here can also be a positive support for children's social skills (Erdem, 2019). Arnott (2016) stated that while playing digital games, children mostly display social behavior, engage in social interaction and participation, and assume fictitious social status roles.

It has been revealed that playing digital games improves mood and emotion regulation and contributes to reducing emotional distress and anxiety (Hull, 2009). In fact, players have argued that digital gaming is a tool for relaxation and stress reduction (Russoniello, O'Brien & Parks, 2009).

There are also benefits of using digital games in education. While learning difficult subjects, they attract the attention of children and increase their motivation and the desire to learn (Aksoy, 2014). Tecen (2018) also revealed that digital games are effective in raising phonological awareness in preschool children. In children who are familiarized with digital games at an early age, they contribute to the development of numerical literacy skills, reading, and language skills (Griffiths, 2002). In mathematics teaching, digital games have a positive effect on the success and motivation of children (Brezovszky et al., 2019; Fokides, 2018; Noah, 2019). Van Bommel and Palmér (2018), in their study comparing traditional methods and digital approaches in preschool mathematics education, found that children reached combinations in a shorter time with fewer attempts by using the digital application. Digital games allow children to learn new concepts according to their choice of game. They also help children to repeat and reinforce the concepts they have previously learned (Lin & Hou, 2016). It has been indicated in the studies conducted that the use of

digital games as an educational tool in the lessons increases the children's interest and motivation for those lessons (Bakar, Tuzun & Cagiltay, 2008). Furthermore, it has been seen that well-designed fun and interactive digital games provide learning by ensuring children's cognitive development and social interactions (Debra et al., 2009). Yildiz (2019) also indicated that educational digital games and digital games used in classrooms were effective in science education, increasing the level of cognitive development and cognitive process skills of preschool children.

In early childhood, the use of digital games takes place with the presentation of the adults around the child (Plowman et al., 2012). Hence, for a digital game to have a positive effect on children, the methods that parents use are important (Nevski & Siibak, 2016). In his research, Budak (2017) stated that, according to parents, the positive aspect of digital games is that they develop creativity, are educational and provide a fun environment. The choice of digital games and the use of playtime in a beneficial way for a child are among the factors that parents should pay attention to. It should not be ignored that the lack of attention paid to these factors causes negative effects of digital games on children (Çakır, 2013).

### ***Negative Effects of Digital Games on Children***

Digital games have as many negative effects as positive effects on children (Horzum et al., 2008). Nowadays, as much as digital tools make life easier, they put some obstacles to the healthy and organized life as well (Gulcek, 2018). Enjoyable digital games used as a recreational activity cause negative effects on children when used in an uncontrolled way (Kuss and Griffiths, 2012).

Playing games is known as the child's area of freedom. The most significant point in a game is that there is interpersonal communication, and creativity and

playmaking are emphasized (Hazar et al., 2017). Yet, in the digital game, the child moves within the boundaries set by those who give directions to players. It is seen that the children who spend a lot of time playing digital games are likely to play fewer face-to-face games with their friends. This negatively affects the shaping of children's thoughts and their socialization (Kucukvardar, 2015). Furthermore, having little interaction with the outside environment can cause children not to be able to use the skills of understanding, recognizing, and empathizing with the emotions of the people around them (Unsal, 2019). This situation negatively affects children's communication both with their peers and their families (Toran et al, 2016).

Not being able to control oneself while playing digital games leads to consequences that affect all aspects of life such as communication, health, and psychological well-being (Hazar & Hazar, 2017). Horzum (2011) stated that children who spend a long time in digital games are not able to quit the game, cannot recognize the difference between games and real life, and do not want to take on the responsibilities they need to fulfill. It has also been determined that the possibility of depression and proneness to smoking and drug use in later life are associated with playing digital games a lot (Männikkö et al., 2014; Wittek et al., 2016).

Digital games cause violence to be normalized in various ways (Koksal, 2015). Digital games normalize phenomena such as violence, war, crime and robbery. Violent games cause the development of aggressive and angry personalities in children. Moreover, they trigger negative conditions such as insensitivity, hostility, and deceitfulness (Bolisik & Muslu, 2009). Selimen (2016) indicated that playing computer games with violent content affected children's tendencies to exhibit aggression. At the same time, it was found that children influenced by violent scenes saw violence as a solution when they were in a

difficult situation (Akçay & Özcebe, 2012; Aydogdu Karaaslan, 2015). The child sees the behavior and attitudes of the character and the identity they play in the game as normal. These behaviors, which include using slang words, using weapons, and shedding blood through the character they play, carry a great risk for children in the developmental age, who can believe and imitate any situation (Çakmak, 2016). Since digital games involve accomplishing certain tasks, children may even harm themselves to fulfill these tasks. The games called “Blue Whale” and “Momo” can be given as examples to such games. These games resulted in the death of many people.

Violent digital games have a negative impact on children's attention as well. Concentrating attention on a subject emerges as a problem especially in children in early childhood (Hastings et al, 2009). Attention is necessary for memory formation. It is therefore critical for the development of early childhood skills (Fan et al., 2005). (Children who spend most of their time playing digital games have difficulty completing their responsibilities such as studying and doing homework (Budak, 2017).

Staying inactive for a long time while playing digital games is a cause of physical problems. At the top of physical problems is obesity, followed by sleep problems, headaches, and increased irregularities in the musculoskeletal system (Dinc, 2012; Mustafaoglu et al., 2018). Children forget to move their bodies while playing digital games. The body is not able to burn the necessary energy, and the desire to constantly eating snacks while playing increases the energy intake (Muslu & Bolisik, 2009). As a result of this, psychological and physical disorders may appear. Furthermore, looking at the screen for a long-time result in watering in the eyes, feeling of stinging and visual disturbances (Eni, 2017; Akçay & Özcebe, 2012). In the study conducted by Odabasi et al.

(2007), it was revealed that in our country there was an increase in the number of children who spend a long time in front of the computer applying to clinics.

## **2. CONCLUSION AND SUGGESTIONS**

In this study, digital games were examined and the effect of digital games on children was investigated. Within this context, it is seen that digital games have positive and negative effects on children. Today, removing digital games from children's lives may cause them to fall behind in technology and prevent them from gaining necessary digital skills. Thus, instead of preventing children from playing digital games, they should be taught to use them consciously and in a controlled manner. Thus, the use of digital games will contribute to development areas of children. However, there are also digital games that may be harmful for children due to their content. Therefore, it is of great importance that potentially harmful games are known and can be evaluated by families.

It is seen that in cases where digital games, played in the virtual environment through various technological devices, are played uncontrollably, they cause certain health issues, negativities in academic achievement, behavioral disorders, negative social development and family communication, and negative effects on perception and attention.

When played in a controlled manner, digital games support children's development. When played for a long time, they cause addiction. It is necessary to minimize the time children spend playing games in front of the computer. Hence, relevant state institutions and organizations should attach more significance to the subject, educators and parents should acquire information on the subject or increase their existing knowledge. Likewise, children and young people should be trained and followed up on the subject.

Being able to choose the right games for children is important. Every passing day, new digital games are being released. Being aware of these games, learning their features, and choosing the right game are difficult. Therefore, it can be recommended to have systems that rate games according to suitable age and the content. A parent user guide can be created about the content of sample applications, daily screen time, and the issues that they should pay attention to.

Violent digital games lead children to aggression. Hence, digital games can be audited and disturbing scenes and violent objects can be blocked. Digital games that do not contain aggression and violence, are appropriate for the age of children, and that support the development of intelligence, can contribute positively to the mental development of children if they are played under the supervision of parents and for a suitable period of time.

There is a need for more extensive research in many areas of this matter such as the effects of digital games on child development and their use for educational purposes, stereotypes in digital games, violence and other harmful content, and rating of games.

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There is no conflict of interest for this study.

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## GENİŞ ÖZET

### Giriş

Erken çocukluk döneminde oyun çocukların gelişimi açısından önemlidir. Çocuklar oyun yoluyla hem kendilerini ifade etmektedirler hem de enerjilerini atmaktadırlar. Aynı zamanda oyunlar sosyal ve dil gelişimi açısından çocukların arkadaşları ile iletişim kurmalarını sağlamaktadır (Horzum, 2011). Oyun çocukların yaratıcılıklarını ortaya koymasını ve geliştirmesine yardımcı olmaktadır. Oyun, çocuğun öğrenme sürecinde daha eğlenceli ve kalıcı olmasında önemli etkide bulunur (Öçelan, 2019).

Teknolojinin hayatımızdaki yeri vazgeçilmez durumdadır. Çocuklarda ister istemez teknolojik gelişmelerden etkilenmektedirler. Bu gelişmeler ile birlikte çocukların oyun araç gereçleri, oyun oynama alışkanlıkları ve oyun algıları da değişim göstermiştir (Yiğit, 2019). Oyun algısının değişmesi ile oynanan oyuncakların yerini cep telefonu, tablet gibi elektronik cihazlar almış durumdadır. Hatta gerçek hayatta oynadıkları oyuncalara gerek duymayan çocuklar dijital ortamda bu oyuncaklar ile ilgili oyunlar oynamaktadırlar (Özsoy & Atılğan, 2018). Günümüzde dünya çapında dijital oyunların çocuklar ve gençler arasında popülerliği artmaktadır (Deng et al, 2015).

Literatür incelendiğinde, dijital oyunların zihinsel gelişime katkıda bulunduğu (Tarhan, 2007), dijital oyun oynamak için harcanan zamanın ergenlerin akademik başarılarını az etkilediği (Drummond & Sauer 2014), dijital oyunların yalnızca akademik bilgilerin kazandırılmasında bir araç olarak değil, aynı zamanda planlama, hedef koyma, strateji oluşturma, eleştirel düşünme gibi becerilerin kazandırılmasında önemli bir araç olduğu (Bozkurt, 2014), günlük yaşamda dijital oyun oynayanların eğitimde dijital oyun kullanımı üzerine tutumlarının daha olumlu olduğu (Noraddin & Kian 2014), dijital oyunların öğrencilerin kişisel becerilerini ve yaratıcılıklarını olumlu yönde geliştirdiği (Hsiao et al, 2014) ileri sürülmektedir.

Dijital oyunlarda savaş, şiddet, suç gibi durumların hayatın bir parçası gibi gösterilmesinin ergenlerde ve gençlerde, duyarsızlık, düşmanlık ve hilekârlık gibi olumsuz etkileri tetiklediği (Muslu & Bolşık, 2009), çocukların bilgisayar oyunu oynama süreleri arttıkça antisosyal saldırganlığın artış gösterdiği (Aydın & Horzum, 2015; Bilgi, 2005; Burak, 2013) belirtilmektedir.

Bağımlılık kategorisinde değerlendirilen bu oyunları oynayanların, oyunu terk edememesi, oyunla gerçek hayatı ayırt edememesi ve oyun sebebiyle

sorumluluklarını aksattığı (Horzum, 2011), düşük benlik saygısına yol açtığı (Demirli & Aydın, 2017), dijital oyun bağımlılığı toplumsal veya duygusal problemlere sebep olduğu ve saldırganlık davranışı uyarımı arttırdığı (Anderson et al., 2010; Erboy, Akar & Vural, 2010; Evcin, 2010; Lemmens et al., 2009), dijital oyun bağımlılığının tetikleyicisi olarak kişilerin duygu düzenleme stratejisi görüldüğü (Wölfling et al, 2008), algılanan demokratik ebeveyn tutumu artıkça dijital oyun bağımlılığının azaldığı (Eni, 2017) ifade edilmektedir.

Dijital oyunların eğitimde kullanılmasına yönelik araştırmaların matematik, fen bilimleri, sosyal bilgiler öğretimi ve dil öğretimi alanlarında olduğu görülmektedir (Bakar, Tüzün & Çağiltay, 2008; Bayat, Kılıçaslan & Şentürk, 2014; Bozkurt, 2014; Çankaya & Karamete, 2008; Fırat, 2011; Karamustafaoğlu & Kaya, 2013; Kaya & Elgün, 2015; Malta, 2010; Peirce, 2013; Taşdemir & Şüyun, 2016; Yağız, 2007; Yiğit, 2007; Yurt, 2007). Dijital oyunlar yoluyla çocukların rota planlama stratejilerinin geliştirilebileceği belirtilmiştir (Lina & Houb, 2015). Ayrıca ebeveynlerin dijital oyun hakkında yeterince bilgi sahibi olmadıkları da yapılan araştırmalarda belirlenmiştir (Aktaş Arnas, 2005; Budak, 2017; Kaşıkçı et al, 2014; Kırık, 2014; Yalçın, 2006).

Çocukları dijital oyun oynamaktan uzak tutmak günümüzde neredeyse mümkün olmamaktadır. Dijital oyunların çocuklar üzerinde olumlu ve olumsuz etkileri yapılan araştırmalar ile ortaya konulmuştur. Bu çalışma doğrultusunda dijital oyunların çocuklar üzerindeki etkileri ele alınmıştır.

## **Yöntem**

Bu çalışmada, oyun, dijital oyun, dijital oyunun çocuğun gelişimindeki yeri ve çocuk üzerindeki etkilerine yönelik yapılan araştırmalar elde edilmiş, çeşitli kaynaklarda yayınlanmış araştırmalar incelenmiştir.

## **Bulgular**

Günümüzde teknolojik gelişmeler neticesinde, elektronik araçlara kolayca ulaşılabilmektedir (Lieberman, Fisk & Biely, 2009). Bu gelişmeler, çocukların günlerinin büyük çoğunluğunu sanal dünyada dijital oyunlar oynayarak zaman geçirmelerine neden olmaktadır (Erboy, 2010). Dijital oyunlar rahatlama ve eğlence olarak görülmektedir. Fakat bu durum çocuklarda dijital oyunların olumlu etkilerinin olduğu anlamına gelmemektedir. Çocukların ilgisini çeken bu oyunlar, yararları kadar tehlikeleri ve sorunları da beraberinde getirmektedir. Bu nedenle dijital oyunların çocuklar üzerindeki olumlu ve olumsuz etkilerinin de sorgulanması ortaya çıkmıştır (Ferguson, 2007).

Dijital oyunların bilinçli ve kontrollü bir şekilde kullanımı çocukların gelişim alanlarına katkı sağlamaktadır (Irmak & Erdoğan 2016).

Yapılan bazı arařtırmalar, bilgisayar oyunlarının zihinsel geliřime katkıda bulunduđunu belirtmiřtir. Oynanan bazı oyunların zihinsel becerileri harekete geirdiđi ve uzun sre konsantrasyon sađladığını ortaya koymuřtur (akır, 2013; Tarhan, 2007).

Dijital oyun oynamanın, ruh halini ve duygu dzenlemesini iyileřtirdiđi; duygusal rahatsızlıđı ve stresi azaltmaya katkıda bulunduđu ortaya konulmuřtur (Hull, 2009). Hatta oyuncular tarafından dijital oyunun bir rahatlama ve stresi azaltma aracı olduđu savunulmuřtur (Russoniello, O'Brien & Parks, 2009).

Dijital oyunlar ocuklarda olumlu olduđu kadar olumsuz etkilere de sahiptir (Horzum et al., 2008). Dijital aralar gnmzde hayatı kolaylařtırdığı kadar hayatın sađlıklı ve dzenli gidiřine de bazı engeller koymaktadır (Glek, 2018). Eđlence aktivitesi olarak keyif veren dijital oyunlar bilinsiz kullanıldığında ocuklarda olumsuz sonuların ortaya ıkmasına neden olmaktadır (Kuss ve Griffiths 2012).

Dijital oyunlar eřitli řekillerle řiddetin sıradanlařtırılmasına sebep olmaktadır (Kksal, 2015). Dijital oyunlar řiddet, savař, su, soygun gibi olguları normalleřtirmektedir. ocuklarda řiddet ierikli oyunlar, saldırgan ve fkeli kiřilik oluřmasına neden olmaktadır. Ayrıca duyarsızlık, dřmanlık ve hilekarlık gibi olumsuz durumları da tetiklemektedir (Boliřık & Muslu, 2009).

### **Sonu ve neriler**

Bu alıřmada dijital oyunlar incelenmiř ve dijital oyunların ocuklar zerindeki etkisi arařtırılmıřtır. Bu kapsamda dijital oyunların ocuklar zerinde olumlu ve olumsuz etkilerinin olduđu grlmektedir. Gnmzde, ocukların yařantılarından dijital oyunu ıkarmak, onların teknolojidenden geri kalmasına ve gerekli dijital becerileri kazanmalarına engel olabilmektedir. Bu nedenle ocukların dijital oyunlar ile oynamalarını engellemek yerine bilinli ve kontroll bir řekilde kullanımı đretilmesi gerekir. Bu řekilde dijital oyunların kullanımı ocukların geliřim alanlarına katkı sađlamaktadır. Fakat bazı oyunların ieriđi nedeniyle ocuklara zararlı olabilecek dijital oyunlar da bulunmaktadır. Bu nedenle zararlı olabilecek oyunların aileler tarafından biliniyor ve deđerlendirilebiliyor olması nemlidir.

Dijital oyunların ocuk geliřimi zerine etkileri ve eđitim amalı kullanılması, dijital oyunlardaki kalıp yargılar, řiddet ve diđer zararlı ierikler ile oyunların derecelendirilmesi gibi birok alanda daha kapsamlı arařtırmalar yapılmasına ihtiya vardır.