

## Is Tour Guiding Possible in Metaverse?

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### Abstract

**Purpose:** Researchers are wondering to what extent it is possible for professions to take place in the coming years in the Metaverse world, which has attracted more attention over time. In this context, it is aimed to discuss whether it is possible to practice the profession of tour guiding in Metaverse.

**Methodology:** The study is based on conceptual research. Since the Metaverse is not a well-known and easy-to-understand concept, compilation studies that constitute conceptual and semantic integrity are needed before empirical studies on the subject.

**Findings:** With the updating of the possibilities offered by the virtual universe over time, it is thought that tour guiding in the Metaverse, which seems impossible at the moment, may be possible in the future. Technological developments and forecasts for the future show this.

**Discussion:** Technology is one of the indispensable elements of human life. The basis of all kinds of materials used today is based on advanced technology. While developing technology paves the way for the formation of a new order in human life, it also provides a source for the emergence of different concepts within this order. One of these concepts is Metaverse. Metaverse, which is the basis of the intertwining of reality and virtual environment, constitutes the main subject of the research. The study is suitable for the "what awaits us in the future?" view on people due to the uncertainty of the Metaverse world, which is a result of the ever-developing advanced technology.

**Keywords:** Metaverse, Technology, Web, Tour Guiding

## Metaverse'de Turizm Rehberliği Mümkün mü?

### Özet

**Amaç:** Araştırmacılar, zaman içinde daha fazla dikkat çeken Metaverse dünyasında mesleklerin önümüzdeki yıllarda ne ölçüde yer almasının mümkün olduğunu merak etmektedir. Bu bağlamda Metaverse'de turizm rehberliği mesleğinin icra edilmesinin mümkün olup olmadığının tartışılması amaçlanmaktadır.

**Yöntem:** Çalışma kavramsal araştırmaya dayanmaktadır. Metaverse, bilinen ve anlaşılması kolay bir kavram olmadığı için konuyla ilgili ampirik çalışmalardan önce kavramsal ve anlamsal bütünlüğü oluşturan derleme çalışmalara ihtiyaç duyulmaktadır.

**Bulgular:** Sanal evrenin sunduğu imkânların zaman içinde güncellenmesi ile şu anda imkânsız gibi görünen Metaverse'de turizm rehberliğinin gelecekte mümkün olabileceği düşünülmektedir. Teknolojik gelişmeler ve geleceğe yönelik tahminler bunu gösteriyor.

**Tartışma:** Teknoloji, insan yaşamının vazgeçilmez unsurlarından biridir. Günümüzde kullanılan her türlü malzemenin temeli ileri teknolojiye dayanmaktadır. Gelişen teknoloji insan hayatında yeni bir düzenin oluşmasının önünü açarken, bu düzen içerisinde farklı kavramların

ortaya çıkmasına da kaynaklık etmektedir. Bu kavramlardan biri de Metaverse'dir. Gerçeklik ve sanal ortamın iç içe geçmesinin temelini oluşturan metaverse, araştırmanın ana konusunu oluşturmaktadır. Çalışma, sürekli gelişen ileri teknolojinin bir sonucu olan Metaverse dünyasının belirsizliği nedeniyle insanlar üzerindeki "gelecekte bizi neler bekliyor?" görüşüne katkı sağlamaktadır.

**Anahtar Kelimeler:** Metaverse, Teknoloji, Web, Tur Rehberliği

## Introduction

Since the existence of humanity, societies have acted with the aim of creating different living spaces for themselves. In addition to its developing basic vital needs, they also act with more socialization instinct. Communication is one of the most basic conditions for people's socialization needs. Along with all the developments needed for socialization, especially communication, people are starting to discover various dimensions of socialization and accordingly, the ways of communicating are being moved to a higher point day by day. People who are too far away to see each other physically communicate thanks to internet-based developments. Thus, the traditional logic of socialization undergoes a major change and a new mobile and internet-oriented socialization form begins to develop.

Technology and the internet, which are considered as a new socialization tool, are increasing on the condition that they depend on the development of societies. Technology, which is used to solve certain problems in different areas of life, is becoming an integral part of human life. In order to understand the basis of technological developments, it is necessary to have a good command of the development adventure of the internet. The development process of the Internet begins with the Web 1.0 technology that developed in the 1990s. Web 1.0, known as WWW (World-Wide-Web) technology, has been integrated into human life very quickly since its emergence. Not long after this development, Web 2.0 technology emerged in the early 2000s (Kapan and Üncel, 2020). Web 2.0 refers to a situation that includes social media and internet users become content producers (Şengel, 2021). From a commercial point of view, while people moved with internet-oriented commerce in Web 1.0, commercial communities started to take place in the internet environment with the advent of Web 2.0 (Yağcı, 2009). Web 3.0 offers the technology required for the use of artificial intelligence (Kapan and Üncel, 2020). Web 4.0, which represents the fourth generation of the web world, is used as the whole of internet networks (Aghaei et al., 2012).

In recent years, the concept of Metaverse has emerged, which is integrated with the developments in WEB technology, which prepares the ground for a virtual universe of its own, and whose effects are thought to increase in the coming years when its features are taken. This new world created in the game and very similar to the real world attracts the attention of many industries. For example, this shows that even the investments made by companies will reach different dimensions. It can be said that tourism, which is one of the industries where competition is strong, is also looking for ways to gain a place in the virtual universe. In parallel with this, the increase in income and leisure time in recent years brings individuals to participate more in tourism activities that have the potential to offer different and fascinating experiences. In addition, it has become easier to reach artistic and cultural activities with computer-based technologies without

moving away from their environment. It can be stated as one of the important steps that museums offer the opportunity of "virtual museum" online by updating their sites. This situation creates a basis for the thought that future travels of individuals will be possible in virtual environments. In this research, which started with the idea that tourism activities will also take place in the virtual universe, in the light of the increasing debates about the Metaverse, "Is Tour Guiding Possible in the Metaverse?" finding an answer to the question is the main purpose of the study. In the study, rather than making evaluations with precise data, the idea is to reveal the importance of the subject and to prepare the ground for discussions that may be related to the subject in the future.

### **Metaverse Concept**

Metaverse is a concept that emerged from the combination of the prefix meta, which means "after" and / or "beyond" in Ancient Greek, and the terms universe, which generally means the universe (Köse, 2021). Based on the research on the concept of metaverse, it can be said that it is not possible to make a uniform definition at present. Mark Zuckerberg refers to Metaverse as "an internet you are in instead of just looking" (TRT Haber, 2022). So much so that Zuckerberg, the founder of Facebook, states that Facebook, which has an important place among social media tools, has changed its name to Meta. Also, Zuckerberg speaks with his own profile in the Metaverse universe in his press release (BBC News, 2021).

Metaverse is a new universe that allows people to come together in virtual environments created with technological possibilities instead of concrete environments. Internet is a network-oriented, continuous platform that is connected to each other in artificial environments created and where multiple users are together. Metaverse allows people to experience multiple emotions in virtual environments thanks to virtual reality (VR-Virtual Reality) and augmented reality (AR-Augmented Reality) technologies, which are important benefits of digitalization (Mystakidis, 2022). Jebara et al. (1997) describe augmented reality (AR-Augmented Reality), which provides the integration of computer technology with wearable technology, as a barrier that serves to carry the computer-human relationship to a different dimension.

Although the concept of metaverse has begun to integrate with people's lives in recent years, it first appears in Neal Stephenson's book *Snow Crash*, which was published in 1992 (Aydn, 2022). Stephenson, from the Metaverse world in his work; He mentions it as a virtual environment where individuals can interact with other people in many different ways thanks to their own avatars. Likewise, he mentions that there is an online world that people adapt to their real lives (Bilton, 2021). On the other hand, William Gibson, the author of the other science fiction novel that most closely conveys the Metaverse to its current style, describes the concept as "cyber space" in his work called *Neuromancer*, which he wrote in 1984 (Köse, 2021). Metaverse is an order in which people travel, live and perform many other functions in the established virtual world (Sipper, 2022). The fact that travel is a part of this new world indicates the existence of tourism movements in the Metaverse world in the future.

The introduction of Metaverse to the internet is realized in the 2000s with the game *Second Life* of Linden Research company (Tidy, 2021). *Second Life* provides a new world

order where multiple players can take place thanks to digital identities that players can create according to their wishes, real estates that can be created in virtual environments, economies that can be used in digital environments, and internet network connections (Hatmaker, 2022). Baudrillard, in the game called Second Life, where users play with 3D technology; states that different phenomena, which are simulated instead of the real world in which individuals lead their lives, and accordingly bring new gains, in the "copy world" (Weiss, 2008).

It is a concept whose existence is intensified in the process called Metaverse Web 3.0 and accepted as the 3rd period in the development of the internet age (Çelik, 2022). Ryan Gill, founder of Crucible; He states that while the architects of Web 2.0 are web developers, the architects of Metaverse-Web 3.0 are game developers (Newzoo, 2021, p. 11).

SuperWorld; It is a virtual world in augmented reality deployed on the world digitally within the Metaverse. It allows users to buy and sell real estate in this world and thus earn money. At the same time, users can receive photos, music, fashion, etc. made by people through NFT. It is possible to buy and sell many different artistic services such as (SuperWorld, n.d.). So much so that Metaverse goes beyond a simple game and provides a trading system in which companies and even individuals invest. The lands sold here will turn into platforms where investors can generate passive income in the long run (Lazar, 2022).

### **Effects of web technology on tourism**

Societies' desire for development becomes a general need. In the changing social life, fulfilling daily needs has become more possible with technology. The motivation for innovation and progress, which is a return of every age, passes through the effective use of technology. Technology and the internet are important elements not only in the fulfillment of vital needs, but also in many different social and psychological issues, especially information. The process, which started with the Web 1.0 (World Wide Web) period, which was developed to facilitate access to information, has reached the level of Web 5.0 today. Berners-Lee (1998) defined Web 1.0 as the "read-only web", the first step of the Web era, which he first considered as an idea in the 1990s, and which he brought to life right after. Getting (2007), in his study about the Web; He states that Web 1.0 is far from people's interaction with each other and creating internet-oriented content, and that it is only the access door in the internet world to seek and access information.

One of the first companies to benefit from the opportunities provided by Web 1.0 is booking.com, the internet extension of Booking Holdings Inc., which started its operations in Amsterdam in 1996. With this initiative, Booking Holdings has achieved the leadership in the digital platform among travel companies (booking.com, n.d.).

The name Web 2.0, which is the second phase of the Web era, first appeared in 2004. Ann Bell conveyed the clearest information about Web 2.0 content in her book published in 2009 by dealing with topics such as Metadata, Photo Sharing, Wikis, Blogs, Web 2.0, Second Life, Virtual Office (Yılmaz, 2010). Dating sites implemented with Web 1.0 have

become the advanced version of Web 2.0 technology, and social media platforms (MySpace, Facebook, Orkut) find their place as social networks (Kahraman, 2010).

It has been observed that individuals who started to use social media actively with this period, used the power of social media intensely while participating in tourism activities. Thanks to the features such as sharing photos, adding videos, following people, liking and commenting on platforms such as Facebook, Instagram and Youtube, which are social media channels that focus on communicating between people, they activate the desire of their followers to participate in tourism activities by sharing from the places they go.

Web 3.0, which has made a name for itself as the Semantic Web; provides individuals with easy access to all kinds of unlimited information. The semantic network, which entered human life as Web 3.0, collects its power and information in the form of data and establishes a connection between each other (Berners-Lee, 2007, p. 45).

There is no clear definition of technology about Web 4.0 technology, although the www (World Wide Web) extension, which has just been included, points to the 4th stage of its development in the technological context (Ersöz, 2020). However, industry 4.0 was mentioned as a term for the first time at the Hanover Fair held in Germany in 2011, and it brought many discussions with it. Nowadays, it is frequently mentioned in fairs, conferences and projects covering many different industries (Drath and Horch, 2014, p. 56).

Everything put forward in Web 5.0 is synchronized with time. It is therefore the online clock that started Web 5.0. Web 5.0 is more commonly referred to as a "responsive network". Its basis is more "emotional and sensory" and accordingly it is designed for the development of computer-based technologies that can interact with people. This new technology, which was put forward in line with this intended goal, turns into a daily need for people (Osorio et al., 2013). With Web 5.0 technology, Hanson Robotics has designed a humanoid robot named "Sophia" with artificial intelligence that can convey emotions and ideas (Tavakoli and Wijesinghe, 2019).

In many tourism netnographies covering the beginning and development process of the web periods; It is important that tourism blogs, social media and websites start to take place with web 1.0 and web 2.0. Ethnographers less frequently explore the technological possibilities provided by web 3.0- 4.0 and 5.0. Web 2.0 refers to the cyberspaces necessary for tourists to convey their feelings and thoughts after the service they receive through different platforms (Tavakoli and Wijesinghe, 2019). Based on this information, it is seen that people who want to plan a holiday, especially based on the tourism industry, can get the best service by following technology when they go to a place they have not seen before, whether individually or collectively. People follow the tourists who have been to the destination they plan to go to before and who share their opinions on social media platforms by making use of businesses such as accommodation, food and beverage in the region. Positive and negative opinions conveyed here can affect tourism demand. With these technology-based developments, it is obligatory for all tourism stakeholders in the tourism industry, where competition is intense, to strive to provide more innovative, high quality and original service.

## The Latest Technologies Used in Tourism

The usage areas of technology and the opportunities it provides are becoming one of the important indicators of the development level of countries and societies. Technology, which is in many different industries, is also among the important elements of the tourism industry. Tourism, which is accepted as a service-based industry, is moving away from being an industry that serves only with manpower. The use of artificial intelligence in the tourism industry has been increasing in recent years, thanks to the high-level use of technology as the return of the virtual universe. Among the services it offers to its guests are accommodation and food and beverage businesses that emphasize artificial intelligence. As an example of these;

One of the pioneers of using advanced technology, Japan has opened its hotel named "Henn na" in Sasebo city of Nagasaki. The most important feature of this hotel is that all its staff are robots (BBC News Turkish, 2015). Another example is the concierge robot named "Connie" used by Hilton McLean in the US state of Virginia. Named after Conrad Hilton, the founder of Hilton Worldwide, Connie can fulfill the responsibility of helping guests locate various venues within the facility (Trejos, 2016). A similar practice took place in Turkey. For the first time, he started to serve the guests with 3 robots called Robi as a waiter in a restaurant in Istanbul (CNN Türk, 2019). Another restaurant with robot waiters is in Mosul. Robot waiters provide service to guests in ordering and serving 15 kinds of food on the menu (NTV, 2021).

In tourism, which is one of the most labor-intensive industries and where manpower is effective, the use of robotic technology has advantages as well as disadvantages. Employment of robot personnel is accepted as an advantage for businesses due to its low cost return. Because robot employment can reduce labor-related costs. Accordingly, businesses provide more affordable service to their guests and increase their competitiveness in preference. Guests, on the other hand, benefit from the more affordable service they receive and the attractive feature of experiencing robot staff. In addition to the producer and consumer-centered advantages, it can be expressed as an important disadvantage of this process that tourism workers face the danger of losing their jobs.

With the use of technology in the tourism industry, the transition to digital is not limited to accommodation and food and beverage businesses. The use of audio guides around the world, especially in museums, is an example of technology-based digital innovations in the tourism industry. However, although it is especially concentrated in the COVID-19 period, the beginning of virtual museums dates to earlier. With the pandemic, virtual museum applications have increased, and it is seen that museums are also open to these innovative ideas.

## Conclusion, Discussion, and Implications

The rapid development of technology today is closely related to the right decisions taken in the past. The fact that there were times that people could not even imagine in the past, reveals the possibility of many phenomena that are now considered impossible to be possible in the coming years. While the virtual universe designed in Metaverse

continues to exist in parallel with real life, it almost exactly overlaps with some points of real life. Metaverse is an exciting and intriguing concept, as well as being the center of attention from time to time, as it has an uncertain future. It is expected that new developments will emerge thanks to the updates that will take place in a short time, in Metaverse, where many situations that were only dreams took place before. Metaverse is gaining more and more meaning beyond a simple game. It takes its share in the new order of life as a universe that lives in its own time, sets rules for itself among irregularities, is known to be unreal, but drags people to a sense of reality. It emerges as a universe in which businesses in different industries invest. In this direction, it is not impossible for tour guiding to find a professional place for themselves in the new world order, which has its own currency, where entertainments take place, meetings are held, hotels are built, and an identity is gained by creating an avatar.

When focusing on the present mission of the Metaverse, it is seen that the virtual universe has a significant impact on individuals. This situation lays the groundwork for the idea that traveling will also be more demanded in virtual environments in the future. McClain (2022) points out to experts in the field of tourism that the Metaverse will become “an evolution of the market” over time, but that it will not replace the travel experience in the seemingly near future. In McClain's study, Dynata's study titled "New Experience Economy", which deals with tourism in the Metaverse, revealed that 40% of the participants were interested in virtual travel, according to the results of the survey conducted by obtaining data from 11,000 participants from 11 countries. In the same study, it was concluded that 51% of the participants were attractive to be in virtual environments related to artistic fields such as museums, art galleries and exhibitions that exist. Another survey on “Metaverse Continuum” Redefining How the World Works, Operates and Interacts was conducted by Accenture (2022), with the participation of 24,000 people from 35 countries and 23 different industries. In this study, it is concluded that individuals have a positive attitude towards the idea of exploring artistic spaces in virtual environments.

It is stated that the reality of Metaverse, which is included in the working lives of the users, will also have an impact on tourism activities in the future. In addition, Metaverse offers users much more than the world it is in. The increase in the users of this virtual environment, which includes many facts, will expand the opportunities it provides to people. So, is it possible for tour guiding to practice their profession in the Metaverse world in the future? Technological developments and forecasts for the future show that this is possible. This situation makes us think that guiding in Metaverse will also enable them to gain a profession.

### **Limitations and Future Studies**

The main limitation of the research is that the study is dependent on the literature review. Since the Metaverse is not a well-known and easy-to-understand concept, compilation studies that constitute conceptual and semantic integrity are needed before empirical studies on the subject. With the introduction of clearer definitions of the Metaverse, the inclusion of more people in their daily lives and the inclusion of

professions in virtual reality, empirical studies on this subject can be carried out in the future.

## References

- Accenture. (2022). *Accenture Technology Vision 2022: "Metaverse Continuum" Redefinin How the World Works, Operates and Interacts.* <https://newsroom.accenture.com/subjects/metaverse/accenture-technology-vision-2022-metaverse-continuum-redefining-how-the-world-works-operates-and-interacts.htm> Accessed: 12.08.2022
- Aghaei, S., Nematbakhsh, M. A. & Farsani, H. K. (2012). Evolution Of The World Wide Web: From Web 1.0 to Web 4.0. *International Journal of Web & Semantic Technology*, 3(1), 1-10.
- Aydın, İ. H. (2022). *Beyin Sizsiniz 5.0 Metaverse Holistik Çağ*. İstanbul: Girdap Kitap
- BBC News Türkçe. (2015). *Japonya'da Robotların İşlettiği Ucuz Otel Hizmete Girdi.* [https://www.bbc.com/turkce/haberler/2015/07/150717\\_japonya\\_otel](https://www.bbc.com/turkce/haberler/2015/07/150717_japonya_otel) Accessed: 01.08.2022
- BBC News. (2021). *Metaverse Nedir, Teknoloji Şirketleri Neden Bu Kadar Çok Yatırım Yapıyor?* <https://www.bbc.com/turkce/haberler-dunya-58960465> Erişim Tarihi: 23.07.2022
- Benito-Osorio, D., Peris-Ortiz, M., Armengot, C. R., ve Colino, A. (2013). Web 5.0: The Future Of Emotional Competences in Higher Education. *Global Business Perspectives*, 1(3), 274-287.
- Berners-Lee, T. (1998). *The World Wide Web: A Very Short Personal History*, <https://www.w3.org/People/Berners-Lee/ShortHistory.html> Accessed: 05.08.2022
- Berners-Lee, T. (2007). Semantik Web'e Hoşgeldiniz. Çev. S. Özdemir, *Elektrik Mühendisliği*, 431, 45-46.
- Bilton, N. (2021). *The Metaverse Is About To Change Everything.* <https://www.vanityfair.com/news/2021/10/the-metaverse-is-about-to-change-everything> Accessed: 27.07.2022
- Booking.com. (t.y). *Booking.com Hakkında.* <https://www.booking.com/content/about.tr.html>. Accessed: 08.08.2022
- CNN Türk. (2019). *İstanbul'da Robot Garsonlar İşe Başladı.* <https://www.cnnturk.com/turkiye/istanbulda-robot-garsonlar-ise-basladi?page=9> Accessed: 01.08.2022
- Çelik, R. (2022). Metaverse Nedir? Kavramsal Değerlendirme ve Genel Bakış. *Balkan ve Yakın Doğu Sosyal Bilimler Dergisi*, 8(1), 67-74.
- Drath, R. & Horch, A. (2014). Industrie 4.0: Hit Or Hype. *IEEE Industrial Electronics Magazine*, 8(2), 56-58.
- Ersöz, B. (2020). Yeni Nesil Web Paradigması-Web 4.0. *Bilgisayar Bilimleri ve Teknolojileri Dergisi*, 1(2), 58-65.
- Getting, B. (2007). *Basic Definitions: Web 1.0, Web. 2.0, Web 3.0* <https://www.practicalecommerce.com/Basic-Definitions-Web-1-0-Web-2-0-Web-3-0> Accessed: 06.08.2022
- Hatmaker, T. (2022). Second Life's Creator Is Returning to Advise The Original Metaverse Company. <https://techcrunch.com/2022/01/13/second-life-philip-rosedale-returns-linden-lab-high-fidelity/> Accessed: 27.07.2022
- Jebara, T., Eyster, C., Weaver, J., Starner, T., & Pentland, A. (1997). Stochastic: Augmenting The Billiards Experience With Probabilistic Vision and Wearable Computers. In *Digest of Papers. First International Symposium on Wearable Computers* (pp. 138-145). IEEE.
- Kahraman, M. (2010). *Sosyal Medya 101 2.0 Pazarlamacılar için Sosyal Medyaya Giriş*. İstanbul: Mediacat

- Kapan, K., & Üncel, R. (2020). Gelişen Web Teknolojilerinin (Web 1.0-Web 2.0-Web 3.0) Türkiye Turizmine Etkisi. *Safran Kültür ve Turizm Araştırmaları Dergisi*, 3(3), 276-289.
- Köse, M. (2021). *Metaverse Nedir ve Neden Çok Önemlidir? Yaşamlarımızı Dijital Bir Evrene Taşıyabilir Miyiz?* <https://evrimagaci.org/metaverse-nedir-ve-neden-cok-onemlidir-yasamlarimizi-dijital-bir-evrene-tasiyabilir-miyiz-11135> Accessed: 25.07.2022
- Lazar, V. (2022). *Metaverse Investing Guide For Beginners: Top 5 Unique Strategies To Create Wealth In Metaverse. Why Metaverse Will Create More Millionaires Than Anything Else. Altcoins, Nft, Defi, Blockchain.* İngiltere: ChaseCheck LTD.
- Mcclain, J. (2022). *Tourism in The Metaverse is Just Around The Corner.* <https://www.tourism-review.com/the-present-and-the-future-of-tourism-in-the-metaverse-news12659> Accessed: 12.08.2022
- Mystakidis, S. (2022). Metaverse. *Encyclopedia*, 2, 486-497. <https://doi.org/10.3390/encyclopedia2010031> Accessed: 27.07.2022
- Newzoo. (2021). *Intro to the Metaverse Newzoo Trend Report 2021. Free Metaverse Report Newzoo.pdf*, Accessed: 26.07.2022
- NTV. (2021). *Irak'ın Musul Kentindeki Bir Restoranda Robot Garsonlar İşe Başladı.* [https://www.ntv.com.tr/galeri/turkiye/irakin-musul-kentindeki-bir-restoranda-robot-garsonlar-ise-basladi,VwGIaNXfcUaDgDC4mkLeVQ/jPC\\_wiFeLEWWTOg4W1MkMQ](https://www.ntv.com.tr/galeri/turkiye/irakin-musul-kentindeki-bir-restoranda-robot-garsonlar-ise-basladi,VwGIaNXfcUaDgDC4mkLeVQ/jPC_wiFeLEWWTOg4W1MkMQ) Accessed: 01.08.2022
- Sipper, J. A. (2022). *The Cyber Meta-Reality: Beyond The Metaverse.* London: Lexington Books
- SuperWorld. (t.y.). *Make The World Yours.* <https://www.superworldapp.com/> Accessed: 11.08.2022.
- Şengel, Ü. (2021). Chronology of the Interaction between the Industrial revolution and modern tourism flows. *Journal of Tourism Intelligence and Smartness*, 4(1), 19-30.
- Tavakoli, R., & Wijesinghe, S. N. (2019). The Evolution of the Web and Netnography In Tourism: A Systematic Review. *Tourism Management Perspectives*, 29, 48-55.
- Tidy, J. (2021). *Metaverse ve İkinci Yaşam'dan Alınacak Dersler.* <https://www.bbc.com/turkce/haberler-dunya-59204426> Accessed: 23.07.2022
- Trejos, N. (2016). *Introducing Connie, Hilton's New Robot Concierge.* <https://www.usatoday.com/story/travel/roadwarriorvoices/2016/03/09/introducing-connie-hiltons-new-robot-concierge/81525924/> Accessed: 08.08.2022
- TRT Haber. (2022). *Metaverse Nedir, Nasıl Girilir? Metaverse'te Her Şey Yapmak Mümkün Mü?* <https://www.trthaber.com/haber/guncel/metaverse-nedir-nasil-girilir-metaversete-her-sey-yapmak-mumkun-mu-665940.html> Accessed: 23.07.2022
- Weiss, S. S. (2008). *(IN)VISIBLE: Learning to Act in the Metaverse.* Austria: Springer Vienna Architecture.
- Winters, T. (2022). *Metaverse -Sanal Dünyanın Devrimine Hazır Olun.* M. Z. Çamoğlu (Çev.), İstanbul: Koblab
- Yağcı, Y. (2009). Web Teknolojisinde Yeni Bilgi Fırtınası: Web 3.0. *ÜNAK 2009 Bilgi Çağında Varoluş: "Fırsatlar ve Tehditler" Sempozyumu*, 01-02 Ekim 2009, Yeditepe Üniversitesi, İstanbul- Türkiye, Bildiriler Kitabı
- Yılmaz, M. (2010). *Exploring Web 2.0: Second Generation Internet Tools-Blogs, Podcasts, Wikis, Networking, Virtual Worlds, and More*, Ann BELL Katy Crossing Press, ISBN: 978-1441-4986-8.