

HR Transform Into The METAVERSE

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Çağla DEMİR, Ph.D.

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Dedicated to my dearest mom...

PREFACE

The social and professional lives of people are changing as a result of the digital world. Especially after COVID-19, the necessity for online education and remote working has emerged, making technological support increasingly crucial at this stage. As the Meta concept is introduced before the end of 2021, various industries launch research that will take place in the Meta Universe as they continue to integrate this technology into their business procedures.

The metaverse is currently used in a wide range of industries, including textile, tourism, logistics, and even health care. By focusing on the HR to Metaverse transformation process, we hope to convey current knowledge and best practices regarding the studies conducted in our book. The authors of the chapters in our book attempt to gain a perspective on these issues by talking about the HR applications in the Metaverse universe and the benefits that this technology will offer to organizations in the field of HR in the future, despite the fact that there are currently few studies on HR and Metaverse.

I would want to express my gratitude to all of the authors who wrote chapters for our HR Transform into The METAVERSE book and supported cross-referencing. Moreover, Associate Prof. Dr. Ayberk Nuri Berkman's assistance with proofreading is acknowledged, and I appreciate his efforts. I am hoping that the book we have written will be helpful to both the academic and business world.

Çağla DEMİR, Ph.D.

HR In METAVERSE

Nil KONYALILAR*

INTRODUCTION

No matter whether one is familiar with developing technologies or not, everyone has begun to hear the concept of Metaverse. Many people wonder what 'Metaverse' means when they hear it for the first time in their lives. This concept, in which many technology giants, including Facebook, started to invest, has recently become very popular. To understand the concept of the metaverse, we must first explicate the word itself. "meta" is a Greek word meaning "after, beyond". Metaverse, which is derived from the combination of the word Meta and the English word "Universe=Universe", means "Beyond Universe" (Köse, 2021).

Metaverse is an informatics Universe where we participate in all Universes in three dimensions, just as we visit different sites on the Internet or different accounts on social media. Due to this feature, it is seen as the new and highly advanced option of the Internet. Metaverse enables people to experience the work, education, entertainment, and shopping experiences that one performs physically in real life, digitally with devices such as VR/AR glasses, in an extraordinary way. Metaverse is the digital twin of the physical world. In other words, Metaverse is the name given to a common virtual sharing domain created by the combination of all digital worlds, namely the fictional Universe in which all digital worlds are located (Lee, 2021).

Metaverse is a hypothetical iteration of the Internet, supporting persistent online 3D virtual environments via virtual and augmented reality (VR and AR) devices alongside conventional personal computers. The metaverse, whose popularity and investment network have expanded in an extraordinary way,

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seems to be at the center of our lives soon. This new technology will need to be seen as a new opportunity for discovery and transformation, rather than a playground or entertainment field (Jooyoung, 2021).

CONCEPTUAL FRAMEWORK

Evolution of Metaverse

Virtual and physical realities are intertwined, making the digital world hyper-realistic. In short, the Metaverse is a virtual Universe where digital environments converge. I want to remind you that the Metaverse is not something to be purchased (Ng, 2021).

Augmented reality poses the real-world environment, and its contents, in computer-generated media. It is an indirect physical view created by enriching sound, images, graphics, and GPS data. This concept is briefly the alteration and augmentation of reality via the computer. In other words, it is called superimposing virtual objects on real images by using the object recognition feature of the devices (Ng, 2021).

Metaverse is the name given to a collective virtual sharing space created by combining all digital worlds, that is, the fictional Universe in which all digital worlds are contained. According to many people, it will be possible to reach this Metaverse, which will be created in the future, through virtual reality or augmented reality. Today, people have the opportunity to communicate with each other online through digital platforms. In the Metaverse Universe, people will be able to immerse themselves in a digital Universe through virtual reality or augmented reality and gain identity in this universe (Köse, 2021).

Metaverse refers to the coexistence of all digital elements of new communication media and technologies. Because there is a fictional universe in a collective virtual living space created by combining all digital elements. Web 3.0 is expressed as the 3rd revolution of the Internet world and has become a subject that is mentioned a lot with the metaverse phenomenon. As it is known, web 1.0, which provides operation over servers, and web 2.0, which is the state of being there after becoming a member through platforms, are the internet infrastructures we still use. The reason why Web 3.0 is being talked about these days is that it expresses the state of being “unmediated” on the Internet with a metaverse-based digital environment (Newzoo Report, 2021).

One can also express Web 3.0 as the realization of the idea of being “decentralized” without being dependent on a service provider. For example, the creation of economic value by blockchain technology and virtual currencies without being dependent on any authority can only become possible and operational with Web 3.0 technology. For this reason, the metaverse needs web 3.0 technology to ensure the coexistence of digital worlds. With Web 2.0, people can communicate with each other and exist on the Internet, but with Web 3.0, coexistence is desired to be built on a new universe with virtual reality and augmented reality. In fact, it is useful to remind again that the metaverse is nothing but the desire to create a new digital universe in terms of understanding the subject. Since this desire also works without being dependent on any authority and center, the “state of being in a decentralized area” brings about the feeling of being in a freer or more democratic environment for the user (Davis, 2009).

Virtual environments have now begun to turn into real life itself. In people’s imaginations, the metaverse is a 3D virtual world designed online with virtual reality glasses (Lee, 2021).

It has been revived as an environment where people can interact and live without real-world barriers. In this world, people can trade, develop job opportunities, and go where they want. Additionally, they can participate in various social activities (concerts, promotions, holidays, conferences, games, etc.) with the help of an avatar. Metaverse, in fact, is a system that has existed for 30 years in people’s lives with various computer games, conference and meeting systems, educational platforms, games and movies, and promotions in this field. CityScape, Minecraft, Roblox, SecondLife, SandBox, DecentreLand, Zepeto, Fortnite, etc. that people use online for gaming, socializing, and entertainment. Metaverse worlds have taken place in our lives for years (Kriptoradar, 2022).

The COVID-19 pandemic period has been an important process for the development of metaverse technology. Before the pandemic, the metaverse was seen as an entertainment platform for people to socialize and play games. However, real-time online distance education systems, business meetings, games, events, etc., are actively used around the world during the pandemic period. practices led to the development of a potential second world (Hendaoui, 2008)

It is sufficient to use any device with the Internet connection to participate in the online environment. In the future, the metaverse is a system planned

to be built on virtual reality and augmented reality technologies, which will allow us to live in this world by completely modeling the world in 3D and using a digital avatar of our choosing (Dionisio, 2013)

Metaverse in Business

Utilization of Metaverse in Different Areas

Jennings et al. (2008) examined the places created and the activities organized by 170 educational institutions in the virtual world called Second Life. The virtual campuses were defined into 2 classes such as active and reflective campuses. As a result of the study, they stated that both of those campuses, which were grouped into two classes, were very complex and well-established, and that each campus provided a different model for how to conduct educational activities in virtual environments. In order to introduce the Second Life virtual world to medical and health educators, Boulos et al. (2007) researched some examples of medical and health education structures and explained that virtual worlds were an important part of the future of web technology and offer great potential in creative medicine and health education.

De Lucia et al. (2009) created a virtual campus in the Second Life environment. They evaluated the simultaneous education and virtual learning of the students in this virtual campus. They analyzed user impressions about presence, awareness, communication, and comfort with the virtual environment and stated that the virtual environment successfully supports simultaneous communication and social interaction and that teachers and students were really motivated.

Schaf et al. (2009) developed a mixed reality laboratory environment for control and automation training that allowed the development of collaborative projects and remote experiments between employees in different locations. Ultimately, they suggested that such an interactive system provides systematic support for workers and engineers, and the presented research can be used as a cost-effective effective tool to support collaborative engineering.

Siyayev et al. (2021) prepared a speech controllable training on aircraft maintenance in a metaverse environment and analyzed the accuracy and error rate of the voice control system. It is stated that the proposed metaverse environment was an inexpensive and scalable solution for aviation colleges

as it replaces expensive physical aircraft with virtual aircraft that can be easily modified and updated, provides technical guidance and all resources to facilitate effective training and teaching of aircraft maintenance, and improves aircraft maintenance training.

Cagnina et al. (2005) investigated how companies can affect their business models in the Second Life virtual world and proposed a mapping framework to support companies. As a result, they found that common competitive frameworks are to see the existence of customers, suppliers, competitors, and complements. Virtual goods trading in virtual worlds is characterized by the sale of virtual goods. It has been emphasized that the existence of a virtual economy and a currency with real value is the distinguishing factor for companies to implement the payment system.

Chesney et al. (2009) conducted scientific research on virtual worlds for the experimental economy. Despite its non-standard nature and the particular flaws of the experimental setting it provides, significant and systematic general differences between their behavior and those observed in traditional settings have not been identified. Ultimately, they emphasized that virtual world economic users were based on similar behavioral patterns observed in standard economic environments. Bourlakis et al. (2009) examined the impact and evolution of the metaverse environment on the stores and retail sales established in the virtual world, and the transition from traditional to electronics and metaverse retailing. As a result of their study, a holistic and inclusive approach is required when designing the promotion strategies of retailers, especially if they aim to work at the metadata warehouse stage. Chandra et al. (2012) conducted a study on the effects of entrepreneurship in the virtual world and the comparison of entrepreneurial activities in the virtual world with the real world and suggested that virtual worlds create more opportunities. The results showed that the paths that user innovators and user entrepreneurs take in virtual life are broadly similar to those in real life. Gadalla et al. (2013) compared the service quality of virtual merchandising in the metaverse environment and web-based online merchandising systems and evaluated the service quality for metaverse merchandising. As a result, they stated that the service quality of metaverse merchandising is different from web-based merchandising, and that metaverse merchandising provides users with features specific to metaverse platforms such as human contact, emotional expression, and virtual experimentation. Han et al. (2010) developed a smart home automation system with a 3D interface in virtual

worlds and used a home server for controller purposes. The researchers were able to control their home devices through a system that works with a realistic design, regardless of time and space, with the help of 3D technology and the internet.

While developments are being made for the shopping people make through their avatars, the concerts they attend, NFT art galleries, and many other collective events, meetings, and presentations stand out as the most important collective events that will affect business life. With the transition to the home working system during the pandemic period, the way of working online, which we accept as a part of our business life, takes a new form in the metaverse. This way of working, which is described as a virtual office, allows people to attend meetings in virtual reality with their digital twins. Among the projects that stand out in the field of a virtual office are Horizon Workrooms, a product of Meta company, and Mesh for Teams, which continues to be developed by Microsoft. These projects enable employees to participate in meetings around the same table in virtual reality from any location. At the same time, it is possible to attend the meeting not only with avatars but also with a live connection (STM Think Tech, 2022).

Sequeira et al. (2013) examined the studies on virtual archeology in virtual worlds such as Second Life and OpenSimulator and evaluated new approaches. Researchers stated that simulations on virtual platforms are already successfully used for education and training and they should be included in the field of virtual archeology.

METAVERSE IN HUMAN RESOURCES

With the help of metaverse, international companies with employees in different geographies can manage their employees in the same virtual world with an equal opportunity. Online meetings will move to the three-dimensional metaverse, where digital avatars are not two-dimensional. Today, the metaverse's emergence as a new model in the remote working system does not seem very unlikely. For example, you can take a virtual walk with the person you are talking to in an online meeting to solve the problem (Vidal Thomas, 2022).

Another very important aspect of Metaverse could be stated as the equality of opportunity only by removing geographical borders. With Metaverse, there will be equality of opportunity in terms of gender, race, and religious beliefs. Measuring performance will also be simpler, as things

will progress more transparently. Some behaviors such as mobbing and harassment can be prevented or easily revealed (Vidal Thomas, 2022).

Online recruitment interviews have been conducted for years and it is a process that human resources professionals have assimilated. However, this process can be completely moved to the metaverse. This situation not only gives the opportunity to get to know the candidate personnel of the companies but also provides the opportunity for the candidate personnel to get to know the company better. Some well-established companies in the USA, which invest in technological infrastructure, make the candidate personnel take a 360-degree tour of the company with augmented reality during job interviews. This allows candidates to experience the company at the decision stage. Needless to say, the better recruiting experience employees have, the more excited they will be to start their journey (Han, 2021).

Finally, another big potential job is in the Learning & Development direction. Computer-based education has been around since the '90s, and companies invest huge sums of money each year into Executive Education Programs that were previously only accessible to a select group of people. Now, anyone who aspires to be tomorrow's leader can participate in simulation-based training on an open 3D learning experience platform, regardless of hierarchy. This increased engagement will increase motivation levels, facilitate "self-paced" learning, and provide unforgettable live experiences (Sivan, 2008).

Virtual Teams

Today, the competition in business is very challenging, and it is necessary to use the opportunities offered by technology in order for businesses to take place in different markets. With the e-commerce applications in the electronic environment, even local businesses have become able to compete in this global market. Businesses that keep up with technology also adapt their infrastructure (Skalidis, 2022).

Virtual team formations in enterprises have accelerated. In fact, these developments have made changes in business structures in accordance with time. Therefore, it will be advantageous for managers to be open to developments and to be diligent in adapting their businesses to this change (Skalidis, 2022).

With the emergence of virtual team structures, employees were offered the opportunity to work in the same environment without being physically

present. The entire communication process is provided electronically. Employees have the opportunity to work regardless of any place or time. Creating a virtual team may not be an attractive situation for businesses that do not want to give up the classic business structure. Because in such companies where the classical management approach is dominant, employees are required to be in certain areas and at a controllable level. These aspects of virtual teams, which are independent of one side, can be viewed negatively by business management (Skalidis, 2022).

One of the most advantageous aspects of virtual team formations for the business is that it lowers costs dramatically. This structuring eliminates space costs. On the other hand, temporally virtual team formations are advantageous. When employees are together, processes such as negatively affecting each other and distraction can cause a waste of time (Zhao, 2022).

Employees in virtual teams can use time more efficiently because they are only interested in their own work. The absence of space limitations in virtual team formations can be attractive to many employees. Employees can fulfill their duties with the online connections they make wherever they want. This flexibility given to the employees is reflected positively in terms of motivation. This situation returns to enterprises as an increase in productivity (Zhao, 2022).

Virtual teams are particularly advantageous for multinational businesses. Employees from all over the world can share their knowledge and experience by holding instant meetings when needed. These formations, which eliminate geographical borders, make it easier to find solutions to problems. On the other hand, this situation reflects positively on the creativity and perspectives of the employees. Another advantage is that it creates an effect that increases cooperation among employees (Zhao, 2022).

Thanks to virtual teams, global collaborations established in areas that require development and change, such as R&D, design, or innovation, result in faster achievements. In this way, businesses can adapt to changing environments more quickly. On the other hand, it is easier for employees to access the training they need. It is possible to reach experts in their field from anywhere in the world and receive training from them and reflect this knowledge to working life (Zhao, 2022).

However, supervision and control mechanism in virtual teams is very difficult to operate. This can make it hard to solve problems that require timely intervention. In virtual team workers, where mutual communication

is very low, it may become inevitable that the feeling of loneliness dominates over time. This situation can have a negative impact on the social life of the employees. Virtual team workers, who have very little face-to-face communication, have difficulty in this regard over time (Zhao, 2022).

Another disadvantage of virtual teams is that the performance of the employees is not seen physically. This situation makes it difficult for the management level of the enterprise to measure performance. This may lead to the fact that the coaching, mentoring, advice, or training needs of the employees cannot be identified and developed (Zhao, 2022).

As a result of such negative effects, the sense of commitment in employees may decrease. Accordingly, an increase in the staff turnover rate is inevitable (Zhao, 2022).

The Future of HR in Metaverse

In this universe where various occupational groups are needed, new employment areas are naturally formed. The workforce working in both technology and design fields is very important for companies in the Metaverse. This is an indication that new job opportunities and professions will emerge in the metaverse field. Professional groups operating in many fields such as crypto strategists, software engineers, business development analysts, artists, designers, content producers, virtual architects, and real estate consultants are expected to take part in the metaverse (Ng, 2021).

In this era of rapid technological advancement, Metaverse is poised to become one of the most important breakthrough technologies of all time. When it comes to the metaverse, companies can use technology to train existing staff, recruit new staff, retain top talent, and offer a level of personalization that helps companies stand out from their competitors. The Metaverse is the next frontier in business and everyone should take note. It is always better to have some cool looks in the game before it's too late. The technology revolution for companies starts here (Ng, 2021).

CONCLUSION

Metaverse, which is an important innovation in the field of technology, brings with it important developments for business life. Just as it has had a great impact on the transition to a hybrid working system, the pandemic has a great role in the development of the concept of the metaverse. The online

working systems that emerged in this period have begun to gain a new dimension in the metaverse.

Aiming to differentiate the way employees see and experience the world, Metaverse also blurs the line between the digital and physical worlds. Business life practices that enable the wheel of the economy to turn come into play. From a marketing perspective, it is thought that a new era will be created for potential human resources applications. With this virtual world, companies will be able to increase their brand awareness, advertise and sell their digital products and increase the productivity of their workforce. It is thought that the data obtained from the databases and the information shared by the individuals voluntarily will provide many benefits.

In the future, the Metaverse world, which should not be seen as a simple gaming world, will be used in consumer products, health, tourism, entertainment, healthcare, and human resources. In this context, it can be said that there will be new professions, certificate programs, and skills that affect individuals. At the same time, plans and strategies should be determined accordingly. It is said that the future collective financial value of all these applications will be in the billions of dollars and will be a smart way for businesses to create an experience that enhances the functionality of their products and services.

In the light of all this, it is very important for companies and employees to be integrated into this virtual world in order to determine their interests and wishes and to provide a competitive advantage for businesses. Metaverse, which is seen as a giant laboratory with direct access to especially young demographic target groups, provides great advantages for identifying interests, needs, and desires. In other words, it is thought that the existence of consumers and businesses in the Metaverse world will be beneficial for both parties. The best interpretation to be made as a result of the information obtained from the studies in the literature and the aforementioned examples may not ignore the potential gains to be yielded with this virtual world.

Although it is seen that the studies on the metaverse are insufficient and many questions remain unanswered, it can be stated that it has gradually become a subject that researchers focus on.

Metaverse seems to offer different working conditions for employees according to today's conditions. In particular, the emphasis that the new generation of employees, defined as the Z generation, demands more flexible

working conditions, appears in various studies. In the future, employees with this generation will be more involved in business life. Considering the different working conditions that the metaverse is expected to offer, it will be possible for the employees to prefer it. As a result of this situation, the number of virtual team employees will increase in the human resources structuring of the enterprises.

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SEARCH AND SELECTION PROCESS MANAGEMENT VIA METAVERSE

Ahmet DOĞAN*

INTRODUCTION

Dynamic developments such as video/online conferencing, social platform and networks, virtual technologies, and augmented reality applications have been observed since internet had started to be used. It is seen that there has been an increasing interest in virtual reality technologies that led to the Metaverse to emerge in recent years (Rawal, et al., 2022).

The metaverse has the potential to spread to all areas of human life, such as education, shopping, hobbies, relationships, and work. According to research made by Gartner (2022), a quarter of people population will be on the metaverse for at least an hour a day by 2026. Soon, businesses will be expected to have the ability to expand and evolve their business models in unprecedented ways by/through moving from a digital-based to a metaverse business model. Depending on the progress, many organizations will offer different services and products within the metaverse.

As in all technological development processes, the use of Metaverse in the business world will gradually take place. While the metaverse makes inroads into business world, Human Resource (HR) can gain greater leadership and ownership (Vulpen, 2022). Depending on how the process goes, it is likely that new methods and applications may emerge in the field of Human Resources Management (HRM) and existing applications will be transferred into the Metaverse.

Industry 4.0 employees must be equipped to be able to adapt to changes immediately in order to stand to the technological disruption in their professions. Regarding to this transformation, the key skillsets required for

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their future roles may not even exist in today's world. This makes it more challenging for the HR department to manage various functions on a regular basis. Therefore, the competitive edge of the human resource department will heavily depend on the ability of the departments to proactively adapt to multiple technologies and skillsets which will help them stay ahead of the race (Harish, Krishnaveni & Mansurali, 2021).

CONCEPTUAL FRAMEWORK

Human Resources Management faces a lot of challenges that are closely related to each unit in the organization. While performing its functions effectively, HRM should consider not only organizational challenges but also challenges arising from social, economic, legal, ecological, technological, and many more factors. While these factors can sometimes become constraints and threats, they also offer opportunities for improvement. An effective HRM must respond appropriately to these opportunities and threats with a system approach for organizational success (Bassett-Jones, 2023). In the contemporary world, strategic human resources management should include functions that are listed below for greater organizational achievements (Dessler, 2020):

1. Human Resources Strategic Planning
2. Recruitment / Talent Acquisition
3. Workforce Management
4. Rewards
5. Employee Engagement and Employee Retention
6. Continuous Development and Talent Management
7. Organizational Development
8. Establishing and Structuring the Human Resources' Function
9. Employee, Labor, and Industrial Relations
10. Labor Law and Regulations
11. Risk Management
12. Information and Technology Management
13. HR in the Global Context
14. Inclusion and Diversity
15. Corporate Social Responsibility (CSR)

Hiring people is one of the important functions of HRM that emphasizes selecting the most suitable candidates with the right skills and attitudes

compatible with the organization that needs to ensure that the job is done correctly. The right skills and compatible attitudes with organizational culture are two sides of the coin in recruitment. Because new hires enter the organization with new skills and attitudes. If their attitudes are incompatible with the organizational culture, the complications arising from the adaptation process can be unnecessarily prolonged (Bassett-Jones, 2023). If their skills are not suited to the job, they may not meet the organization's expectations and the requirements of their position. The cost of this incompatibility can be quite heavy for both the organization and the person.

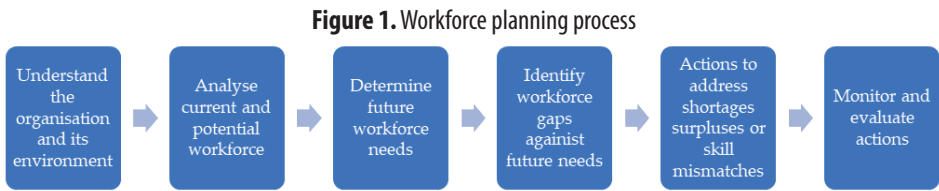
Search and Selection Process in Human Resource

Modern human resources managements' hiring strategy is known as "to choose the right person for the right job by various methods" for the organization. The need for human resources, which is one of the most critical resources, evolves from three fundamental conditions for organizations (Armstrong, 2006):

- The establishment of new businesses,
- When vacant positions need to be filled due to reasons such as layoffs, transfers, promotions, retirement, and death,
- Technological or social changes as a result of the emergence of a new task.

To achieve their strategic goals, organizations need to find the best group of employees, attract them to their company, and then keep them long enough to get some return on their investment. There are costs and benefits associated with alternative labor supply, and the process of meeting labor demand must change over time for many reasons, some of which stem from a company's strategic move and business model. Employers who can leverage the best talent pool to implement their own unique competitive strategies often gain a competitive advantage over their competitors that is sustainable over a long period of time. HR professionals need to understand both the process and the competency. Not only as a part of the strategic planning team but as someone involved in hiring managers and leaders who will need to understand both. This is where HR and workforce planning enters the equation (Noe, et al., 2023). Overall, strategic HR plans often inform the recruitment and selection process as they identify current and future human resources' need required for the achievement of the organization's strategic goals (Klikauer, 2022).

HR planning has been defined as having the number of people, at the right place and time, with fitting skills, abilities, and knowledge. And convenient HR plans with organizational strategy are crucial for organizational success. From a strategic perspective, HR professionals should analyze the current workforce profile in detail and estimate the workforce that will be needed in accordance with the strategies of the organization. At the same time, by taking into account the increase or decrease in the number of employees at various levels and roles in the organization, they should make calculations regarding their projected wages and other social rights. They should ensure that all these plans are compatible with the organizational strategic plan, and internal and external environmental conditions. HR forecast can lead to one of three outcomes: reduction in a particular field(s), expansion of workforce in existing or new roles, or maintenance of status (Malik, 2022). Workforce (manpower) planning can be defined as a process that requires a sequential set of steps as illustrated in Figure 1.



Source: Marchington, et al., (2021).

Recruitment

The hiring process consists of two important parts: search and selection. When the literature is examined, it is seen that the concept of “recruitment” is not used in the same sense by different authors. For example, according to Malik (2022), Klikauer (2022), and Tarique, Briscoe & Schuler (2022), recruitment emphasizes creating a pool of suitable candidates. According to them, recruitment involves looking to attract qualified applicants to create a pool of candidates for possible recruitment screening. But Dessler (2020) defines “recruitment” in a slightly different manner. According to Dessler, recruitment is to attract and find applicants for vacant positions. In this study, recruitment is defined as finding the human resources that the business needs, attracting their attention, and bringing them into the business. At this point, it would also be useful to explain the concept of talent acquisition and succession planning which are concepts that are close to recruitment and are used interchangeably from time to time. Talent acquisition covers

the strategies, tactics, and processes that an organization will develop to identify, recruit and retain the human resources it needs or anticipates what it needs (Lauby, 2022). At this point, it can be said that while recruitment is about filling open positions, talent acquisition differs from it and it is rather an ongoing strategy for organizations to find experts, leaders, or future managers.

Succession planning, which involves developing workforce plans for the upper echelons of the organization, is the process of systematically identifying, evaluating, and developing organizational leadership to improve performance (Dessler, 2020). To carry out the recruitment process effectively, it will be useful to determine the recruitment strategies. Clarifying the details about the position to be hired at this stage ensures that the right candidate is identified for the organization while ensuring that interviewers are directed to the right candidate and develop appropriate selection tools.

While determining Recruitment Strategies, information about the position (whether the position is short-term/long-term, salary level, to whom they need to report, etc.); the competencies, knowledge, and abilities that the person who will do this job should have (foreign language, technical knowledge, education, etc.); responsibilities, authorities and duties (daily, weekly, long-term duties and responsibilities); future opportunities; sources of motivation; many issues such as the interview process need to be clarified (Taylor, 2022). The field of recruitment has dramatically changed in recent years in some quite fundamental ways. Table 1 shows the basic methods used in recruitment in accordance with these changes:

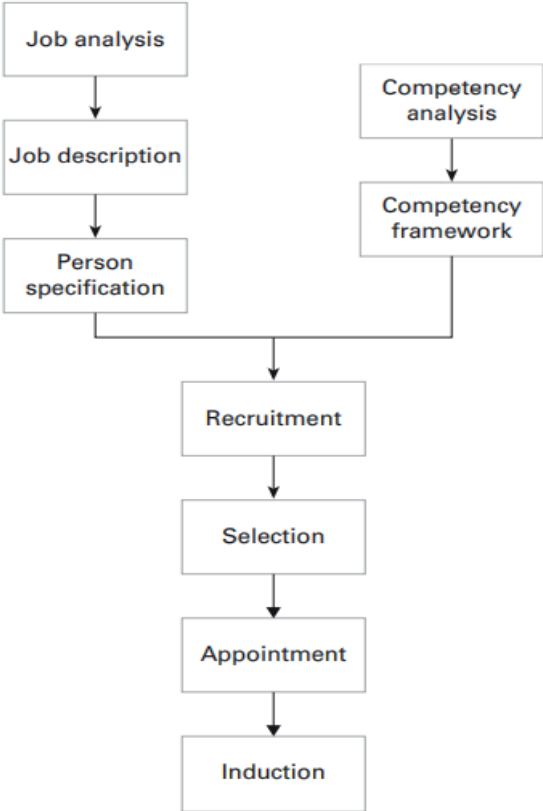
Table 1. Overview of Recruiting Methods

Method	Advantages	Disadvantages
Company's website	Using the business brand, reaching candidates directly	Websites must be supported by other media.
Career/employment website	Employment websites support achieving more candidates, finding job offers, and CVs	Inaccessible to talented candidates who are not actively looking for a job
Social networks	Supports staying connected with the social network	Social connections force employers and job seekers to develop their own user profiles
Job advertisements	It also allows reaching people who are not actively looking for a job	Social connections force employers and job seekers to develop their own user profiles
Public employment offices	Saves time. Reduces problems and uses the public candidate database.	Candidate dissatisfaction and database insufficiency
Recruitment agencies	Provides expertise and facilitates the process of hiring, saving time	The costs of consulting services are high
Job fairs	Free of cost for applicants	The risk of focusing on routine work
Educational institutions	Attract to talents	Graduate campaigns costs can be highly

Source: Stofkova & Hraskova, (2020).

According to the approach traditionally accepted by HRM experts, a good recruitment process consists of a series of defined stages, starting with job analysis and ending with the employee’s employment, as illustrated in Figure 2.

Figure 2. Key steps as part of a regular hiring process



Source: Taylor, (2022).

Searching

After the workforce planning is completed, the recruitment process can be started. The first step in this phase is sourcing, which is defined as the process of finding qualified candidates. There are two types of resources for organizations, internal and external. Internal resources refer to people who are already working in the organization and who can be candidates for the position. Internal staffing requires careful coordination of the existing team and changes in open job positions (Laumer, Maier& Weitzel, 2022). External sourcing is actualized by the candidates outside of the organization who are

reached through resources such as social media, career sites, associations, professional consultancy, and corporate sites (Lauby, 2022).

The searching process is referred to defining specific profiles which are talented and suits the organizations' requirements and developing strategies or approaches to identify the right candidates, and screening candidates via initial interviews (Russell- Rose, et al., 2016). The challenges for HR professionals will rapidly affecting recruiting needs, such as keeping up with the latest technology used in recruiting, and adapting to new recruiting tools (Harish, Krishnaveni & Mansurali, 2021).

In recent years, online recruitment ads of various types have largely eclipsed traditional approaches as using printed media. According to the results of the research conducted by CIPD (2020), only 2 percent of employers in the private service sector and 6 percent of employers in the manufacturing sector advertise in printed newspapers. According to the same research, the most effective recruitment methods according to employers are perceived as 'corporate websites', 'professional networking sites (LinkedIn, etc.), and 'internal advertising to the existing talent pool'.

Selecting

The selection process is designed to select the right candidate, referred to as 'talent' in HR literature, from a pool of suitable applicants. "Selection" refers to choosing the most suitable person or persons for the job, focusing on collecting accurate and valid information about applicants and analyzing them appropriately (Klikauer, 2022). There are many different selection methods that can be preferred, such as structured/unstructured interviews, special aptitude tests, general aptitude tests, personality inventories, group exercises, gamification, role playing, case studies, assessment centers, and it is impossible to explain all of them on a few pages of the general HRM sections (Marchington, et al., 2021).

It can be said that, the most commonly used method for determining potential candidates is to conduct an in-depth interview. In addition, pre-recruitment tests are also performed to assess their compliance with the position requirements and corporate culture. The process of evaluating candidates also includes reference checks and background checks, as well as negotiating about employment offers (Diawati, et al., 2019). Game-based assessments are gaining popularity among the assessment approaches used today. While this situation helps to develop tools that will provide more

suitable candidates for positions, it also brings difficulties such as reorganizing the organization in a different way from traditional methods through using training evaluators, and adapting evaluators. The study findings of Schmidt, et al., (2017) indicated that most of the techniques have low accuracy levels in making effective selection decisions, as can be seen in Table 2. When the table is examined, it is seen that the combination of tests and interviews increases their predictive validity.

Table 2. Predictive validity of selection methods

Methods	Predictive validity
Ability test + integrity test	0,78
Ability test + structured interview	0.76
Ability test + unstructured interview	0.73
Ability tests	0.65
Structured interviews	0.58
Unstructured interviews	0.58
Telephone interviews	0.48
Job knowledge tests	0.48
Integrity tests	0.45
Biographical data	0.35
Educational grades	0.34

Source: Schmidt, et al., (2017).

Extending The Job Offer

In the recruitment process, which starts with HR planning, the selection process and tools are determined and designed, applications are reviewed, tests are administered and scored, interviews are conducted, references are checked, and finally the decision stage is reached. At this stage, the organization must pick from several qualified candidates while specifying which candidates are to be hired for the jobs. The selection made as a result of this situation combines objective criteria with subjective judgments (Noe, et al., 2020).

The human resources department is responsible for informing the candidates about the positive or negative results at the end of the selection process. The job offer of the organization should be sent to the preferred candidate. The proposal should include the job’s duties, authorities, responsibilities, working conditions, legal and fringe benefits, payment, start date, and other relevant details. The person submitting the offer should also indicate the expected date of reply from the candidate. HR professionals should record the candidate’s response to the job offer, as well as the person who conveyed the decision regarding this process, with whom, when, and

for which position they were contacted. Additionally, they must coordinate the necessary preparations for the new employee who will start working (Schweyer, 2004).

The Role of Technology in Search and Selection

In the beginning, human resource management functions were more related to human-human and human-job relations. According to technological and social changes, the HR approach has also changed. In this new age, HR is affected by constantly changing technologies and must use them effectively (Gardner, et al., 2003).

Additionally, HR must consider and develop new approaches to adapt to technological development that will impact business input, processes, and results. In the 21st century, HR should be improved with the latest technologies that can adapt to HR functions for the new generations. These adoption processes get even more complex with the emergence of various technologies such as augmented reality, virtual reality, artificial intelligence (AI), the Internet of Things (IoT), and many more. The adoption of these technologies is termed as HR 4.0 which is a relatively new concept (Harish, Krishnaveni & Mansurali, 2021). Such as Machine Learning, which offers possibilities to support learning, knowing, deciding, solving, and acting in HR, technological developments might ensure profound changes in HR and could even drive its much-cited “digital transformation” (Strohmeier, 2022).

Recruiting practice has changed more in the last decade than it changed in preceding decades (Chapman & Mayers, 2015). Today, there are many technological solutions or tools such as application tracking systems, mobile recruiting, artificial intelligence, automated scheduling software, and video interviewing tools, which play an especially important role in the recruitment process (Lauby, 2022).

Electronic Job Applications

Electronic recruitment is a constantly evolving field with rapidly developing technologies and renewed methods. Although online recruitment dates back to around 1994, e-recruitment technologies have been used since the 1980s (Schweyer, 2004). Some of the milestones for online recruitment sites are shown below in chronological order:

- The first application tracking system, Restrac, was produced in 1981.
- Restrac was followed into the marketplace by Resumix in 1988.

- Monster & CareerBuilder (originally called NetStart) was founded in 1994.
- Kariyer.net was launched in Turkey (1995).
- Monster was sold to Jobs.com in 2002 for \$800,000.
- In 2003, LinkedIn ushered in a new era for job postings and digital platforms (Schweyer, 2004; Miller-Merrel, 2022).

Organizations, that use web-based application tools require applicants to apply for jobs online. The tools allow organizations to use keyword scanning systems to determine whether applicants are suitable for the job. In this way, it is believed that HR professionals gain significant advantages in the process of reaching more candidates and selecting suitable candidates for the job. However, significant research and discussions have been conducted on web-based applications in which applicants are directed to organizations, the legality of the content of these applications, the administrative use of these systems, and individual factors affecting usage rates (Stone, et al., 2015).

On the job seeker side job searching is now done “on the go,” by using tablets and phones. On the organizations side, which is looking for talented candidates, they should adapt to the ever-changing technological infrastructure and ensure that company information is readily accessible from mobile devices (Chapman & Gödöllei, 2017).

As mentioned previously, in parallel with the 4-level development in Web technologies, the changes that occur with the use of these technologies in the recruitment process are seen in Table 3 (Wozniak, 2014).

Table 3. Web technologies and selection

WEB Technology	Major feature / (distinctiveness)	Appliance type	Most important quality for the organization
1.0	One-sided communication	Websites; (company or general employment)	Possibility to embed a lot of recruitment information on the website
2.0	Observing communication between candidates	SNW (social networking sites) and search engines	Opportunity to evaluate a candidate without noticing
3.0	Mutual communication between the company, the candidate and the candidate groups	SNW, personel blogs, image building tools, games,	Maintaining a network of brand ambassadors in diverse communities
4.0	Performing recruitment tasks by people in a company's environment at the company's request;	All previous technologies Plus community building tools and rewards for referrers	Opportunity to reach wide and diverse social groups with recruitment information

Source: Wozniak, (2014).

Electronic Tests and Personality Inventories

The tests and inventories used in the personnel selection process are usually classified differently according to the subject they measure or define as cognitive (mental), motor and physical ability, interest or achievement tests, and personality inventories. Today, the use of computerized and/or online tests is gradually increasing because their implementation is faster and more cost-effective, as well as their reliability analysis is easier. In addition, in some advanced versions, the questions can be differentiated according to the answers of the user through adaptive inventories. This increases the validity of the tests and makes it less likely for candidates to share test questions. Today, there are computer programs and applications that are designed to read and evaluate applicants' essays (Dessler, 2020).

Electronic Interviews, Video-Based Simulations

A computerized interview is an interview in which verbal key answers of a job candidate are received in response via computerized tools. Nowadays, it is quite common to ask a series of multiple-choice or open-ended questions about the candidate's background, experience, education, skills, knowledge, and job attitudes in web-based "face-to-face" interviews conducted with different applications via phones and tablets.

Situation tests require interviewees to provide appropriate responses to situations that represent the job. Video-based simulations are applications in which a work-related virtual and/or hypothetical situation is presented to the candidate with via different tools such as computer video, and then one or more than one multiple-choice questions are asked related to the topic. The candidate is expected to give the most appropriate answer according to the case given case to them. Miniature job training and evaluation is a method in which application performance is monitored after candidates are trained to perform certain job-related tasks and this evaluation is taken into account during the recruitment process (Dessler, 2020).

Gamification of Recruiting

Gamification refers to using games and game mechanics to facilitate various organizational functions. An immensely popular approach today, gamification applies game elements to non-game contexts. In this way, the system used, services, and activities, whether digital or not, are made more enjoyable and motivating (Deterding, et al., 2011).

Gamification motivates individuals by meeting their internal human needs such as autonomy, competence, and relationship. Due to well-structured game elements, job seekers and employers can increase the effectiveness of the process by exhibiting active participation behaviors. Among the examples of gamification, it is seen that there are different applications for employers, candidates, and referrers. For example, applications that direct the hired people and provide points and bonuses to the employees can be designed. For job seekers, gamification applications that reward and rate by scoring according to the useful information they upload to their resumes can be mentioned. Similarly, applications can be organized for employers, where they are rated according to criteria such as ease of the process, speed, and feedback quality. Gamification is an ever-growing trend that many organizations are using today (Chapman & Gödöllei, 2017)

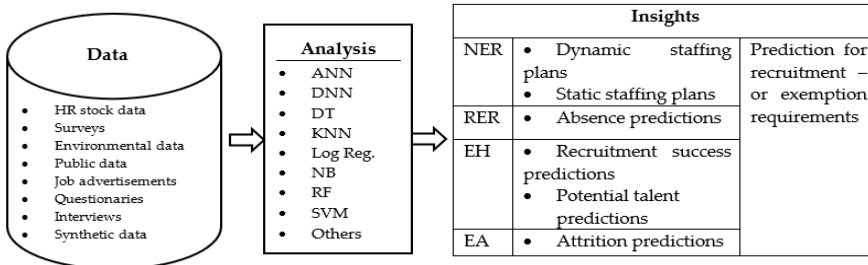
Social Media and Recruiting

Social media, which plays an increasingly important role as a search and selection management tool in the recruitment process (Landers & Schmidt, 2016), is defined as internet and Web 2.0-based platforms that allow users to create and share their own contents (Kaplan & Haenlein, 2010). Recruitment professionals are increasingly using social media to find out about candidates and try to predict the behavior and attitudes of candidates if they are hired for the current position. It is thought that information obtained from social media may reflect better on the applicant's actual knowledge, skills, abilities, and personality than the information requested and obtained through traditional tools such as resumes and cover letters. A lot of data encountered through social media, from candidates' profile photos to other people's statements about the candidate, allows employers to get an impression on many issues, ranging from the applicant's suitability for the position to professionalism, employability, reliability, and salary expectations. Although social media represents another blurring between the personal and professional self, it helps to recruit the best applicant by providing the opportunity to increase citation certainty (Carr, 2016) to all parties.

Artificial Intelligence in Recruiting

Artificial intelligence can be used to analyze information about candidates and jobs to make predictions about a candidate’s suitability for a vacant position. These approaches automatically extract the candidates’ data, provide additional background information, and score the candidates based on an objective scoring system, enabling faster comparisons. In addition, the future performance of candidates can be predicted through current employee characteristics and job performance data. In this case, the recruiters are supported by artificial intelligence to find the best match from within the organization for an open position (Laumer, Maier& Weitzel, 2022). Figure 3 illustrates the model of the use of machine learning (ML) in recruitment processes by Meier and Laumer (2022), in which 65 studies were examined. It makes a significant contribution to effective forecasting in recruitment processes.

Figure 3. HR staffing ML model



Source: König and Langer (2022).

SEARCH AND SELECTION PRACTICE IN METAVERSE

Metaverse may rewrite scenarios for many aspects of the workplace and HRM. The metaverse might cause changes in the way people interact with each other and work. All aspects of HRM, including recruitment, training, and performance evaluation, will probably change significantly.

Metaverse

Although the term metaverse has been attributed varying definitions in recent years, metaverse is a term that incorporates all definitions because it is an idea/concept/notion rather than a reality. One reason is that the language which is used today, cannot adapt to such a complex futuristic concept (Hackl, 2023). Despite the difficulty of defining the concept, considering different

conceptualization efforts will contribute to the development of a more comprehensive definition of the concept in the following stages (Almoqbel, et al., 2022). According to Sipper (2022), metaverse is the virtual world, where humans currently travel, inhabit, and perform numerous functions.

Metaverse is defined by Ball (2022) as “an immerse-scale and interoperable network of 3D virtual worlds created in real-time that can be experienced simultaneously and permanently by an effectively unlimited number of users, with an individual sense of presence and continuity of data such as identity, history, rights, objects, communications, and payments.”

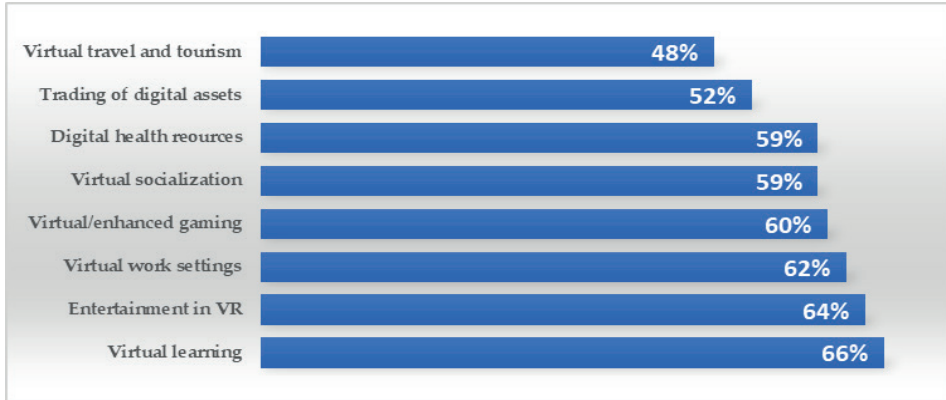
Metaverse is a network of always-on virtual environments where many people can interact with each other and with digital objects while actualizing their own virtual representations - or avatars (Yu and Yu, 2023).

Metaverse can be explained with the help of 3 fundamental aspects - availability, standardization, and interoperability. Presence is the feeling of being in a virtual space with virtual others. This feeling is achieved via virtual reality technologies such as head-mounted displays. Standardization is the thing that ensures the interoperability of platforms and services in the metadata repository. Interoperability is being able to be obtained without any difficulty in traveling between virtual spaces through the same virtual assets such as avatars and digital items (Le and Ratan, 2021).

Metaverse in Business Area

Despite varying levels of enthusiasm and awareness regarding the metaverse, applications that use the metadata store are expected to have an increasing impact on people’s daily lives over the next decade (Betti, Bohre & Li, 2023). According to the results of the survey which is conducted by Ipsos for the world economic forum covering 29 countries, the biggest changes will be felt in virtual learning, entertainment and virtual work environments (Figure 4).

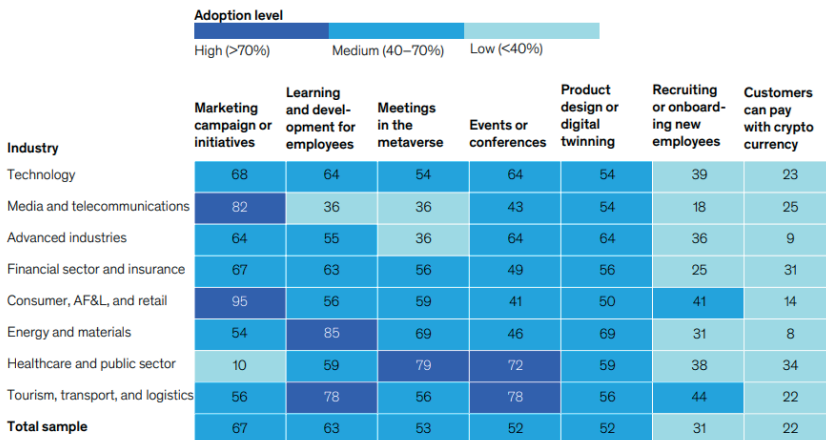
Figure 4. How metaverse applications will impact people’s lives



Source: World Economic Forum, (2023).

According to the results of McKinsey’s (2022) research which is “value creation in the metaverse: The real business of the virtual world” is predicted that by 2030, the metaverse can generate revenues between \$4 trillion and \$5 trillion in consumer and enterprise use cases. In the research, the result is emphasized that “Given the variety and multiplicity of potential applications and uses, and the degree of investment from big tech organizations, enterprises, corporations, and brands, the metadata pool is also emerging as the biggest new growth opportunity for many industries over the next decade. While most up-to-date efforts to have centered around marketing, industries are learning and evolving for employees; virtual events, meetings, or conferences; and it is stated that metaverse initiatives are already applied both in product design and/or digital mapping functions (Figure 5).”

Figure 5. How metaverse applications will impact people’s lives



Source: World Economic Forum, (2023).

Search and Selection Practice in Metaverse

Metaverse can be used in recruitment, job hunting, and HR in different ways. It will be possible to enable candidates/individuals to fully experience a day in their lives through VR and 3D worlds developed for businesses. In this way, for example, it will be possible to give candidates a certain role experience in a business and to observe it. Metaverse technology can be effectively used to create a practical test for job applicants and assess their ability to perform in the role. For example, through ensuring that the candidates who are interviewed for a physically demanding role, experience the situations they may encounter in their ordinary work days so that, the decision of being able and/or willing to do the job will become clear for the candidate, while it will provide an impression of the candidate's performance for the employer. Remote interviews can be held in the Metaverse that will enable the evaluation of professional and fundamental competencies in virtual reality (Rosa, 2023).

As more and more people interact with the Metaverse, the recruiting industry will adapt. In parallel to this new situation, it is anticipated that Metaverse will be used more for linking and recruiting talents. However, virtual reality systems require both hardware (i.e. computers, 3D mice, position trackers, input devices, data gloves, output devices, glasses, audio devices, haptic devices, and visual displays), and software. The software creates the virtual environment, and it also integrates the hardware interface into a working system. Hardware enables users to navigate, interact and immerse in the virtual environment. At this point, recruiters will need to be located where they can best interact with the talents they need and manage to engage them effectively.

Organizations that continued their activities during the Covid-19 pandemic as a global necessity had to make their new hires remotely. For recruiters who specialized in traditional recruitment methods, hiring new candidates, and interacting with candidates through a screen have been a little difficult for recruiters. At this point, it has been proven that the metaverse can help HR professionals. For example, Samsung hosted a virtual recruitment fair in September 2021 on a platform called Gather Town, where candidates can create their avatars, talk to the company's HR managers, and ask questions about the organization in a relaxed and informal environment. A few weeks later, Hyundai Motor and Lotte E & C did the same. Similarly, PwC UK has created a metaverse platform called Virtual Park to interview candidates from

avatar to avatar. Hyundai, on the other hand, not only organized a virtual career fair but also joined new employees through virtual incentives using the Zepeto app. In addition to interviewing and candidate selection during the recruitment process, Metaverse also offers the opportunity to develop new approaches to the adaptation process by organizing a virtual tour of the workplaces for suitable candidates (Citi PPS, 2022; Strazzulla, 2022).

Virtual recruitment is not used at the same level in every country and industry today. However, it is seen that organizations with an active virtual world as a business model (ie. biotechnology, medicine, health...) use virtual recruitment more effectively for recruitment processes. At this point, it can be said that the cooperation of organizations with consultancy firms specialized in virtual recruitment will increase the effectiveness of the process (Mills, 2022).

It is stated that the virtual recruitment process, which is carried out for different purposes such as scholarship and school entrance, causes a loss of access to traditional information flows, and virtual platform interactions affect candidates' decisions. However, candidates indicate the belief that virtual interview difficulties could be alleviated by providing additional objective program measures and triangulating independent data (Anteby, et al., 2022).

Virtual reality can provide a more valid reality than some traditional election methods. In addition, it is possible to talk about advantages such as higher standardization of virtual reality, consistency, flexibility, and getting rid of non-verbal communicative effects caused by evaluators.

Table 4 has been adapted for the surgical technologist position by Aguinis, Henle & Beauty (2001) based on the comparison table of traditional evaluation and VR evaluation approaches they have made for different jobs. KSAO data on the surgical technologist job were obtained from O*net Online, a professional information website. As in all kinds of measurement and evaluation processes, it is important to check that the tools used in the evaluations to be made with virtual reality applications are appropriate, valid, and reliable. In this context, evaluation practices should be defined primarily to cover knowledge, skills, abilities, and other characteristics (KSAOs).

Table 4. KSAO samples for surgical technologist Traditional Approach & VR comparison

	Traditional approach	VR approach
Technical Knowledge Surgical procedures	Interview, Role Playing	HMD: Watch the surgical procedures and identify code violations. Following the surgical procedures
Skill Drawing blood	Application on mockup	Seated BOOM or vehicle- based system: Drive bus in a variety of traffic condition
Ability Remain calm in a crisis	Interview / Inventories (Behavioral etc.)	HMD and Data Glove: Drawing blood at virtual accident scene
Other Characteristics / Lack of squeamishness at the sight of blood	Practice	HMD and Joystick: Perform tasks in a virtual hospital or play a virtual reality game
HMD: Head-Mounted Displays BOOM: Binocular Omni-Ori Monitor CAVE: Cave Automatic Virtual Environment		

Source: O*net OnLine (2023).

Disadvantages of Using Virtual Reality for Recruitment

Although the use of virtual reality in the selection process shows great promise, there will likely be many disadvantages in practice. Some of these disadvantages can be expressed as follows:

- Some of the candidates may experience negative physical effects when they are intensively immersed in virtual reality environments.
- Some of the candidates who have applied may not have sufficient knowledge and experience in using virtual technology, in which case the candidates will first need to be trained and experimented on how to run simulations.
- The fact that the tools and tests to be used in the recruitment process could not be selected correctly, or that the measurements made were not valid and reliable (Aguinis, Henle & Beaty, 2001).

CONCLUSION

HR has an important role to achieve organizational goals. Especially HR has many critical responsibilities and duties in the searching and selecting process. Organizations should consider the metaverse while hiring. Nowadays we are still within the early days of the metaverse. But HR must have to initiate policies, applications, and tools. Metaverse can open up an effective space for HR in the recruitment process by reducing time and

spatial dependency and enabling the development of creative and original assessment center application tools with lower costs. Undoubtedly, machine learning, artificial intelligence and metaverse approaches will become more and more important for recruitment (Köning & Langer, 2022). In this concept, creating virtual offices and markets in Metaverse will become a great opportunity for companies that aim to use the flexibility of remote working while maintaining a strong working and organizational culture (Vulpen, 2022).

Although there is a belief that technologies such as artificial intelligence will end many existing jobs, it can be said that these technologies will allow jobs that did not exist before to emerge. Such as Chief Metaverse Officer, Chief Trust Officer, Chief Reality Officer, Spatial Creative Director, Psychedelic Taste Tester, & Metamarketer (Hackl, 2022; Li, 2022). With this structural change in jobs, and with the help of evolving technology, HR Management should focus on how to increase access to jobs for individuals with different disabilities for potential recruits who were previously excluded from current technologies. There are quite many groups of people who have mobility limitations due to illness or injury, but with great skill sets. HR structures should develop alternative approaches and practices for the participation of individuals who are excluded or blocked for different reasons with these developing technologies.

The Metaverse can provide potential benefits for economic and social development while offering unlimited new possibilities. As a natural result of using the Metaverse, innovative business models will emerge that will promote competitive differentiation and new consumer experiences will be brought to light.

Despite all these, like all other emerging new technologies, development areas such as ensuring privacy and security, legal and ethical regulations and adaptations, the development of governance models need to be taken into account; the threats such as infrastructural inadequacy, and the difficulties of using metaverse technology should be avoided.

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LEARNING AND DEVELOPMENT VIA METAVERSE

Sevdiye KEMİK*

INTRODUCTION

Human resources are part of the organization, regardless of the size of a business or organization. Like other departments that fulfill certain definitions and duties for businesses, human resources is a unit that carries out activities on behalf of the business. Human resources emerged as a function within organizations as a response to economic development and industrial change.

The human resources department can be defined as the department of the business that is tasked with finding, screening, recruiting job applicants, managing, and training employee benefits programs (Kenton, 2022). According to another definition, the human resources department of a company or organization is generally defined as responsible for creating, enforcing, and overseeing the policies that govern the relationship between the managers and the employees of the organization (Chai, 2020). Another definition of the concept is as follows; It refers to the policies and practices regarding the execution of the human components of human resource management such as recruitment, screening, training, rewarding, and evaluation (Legge, 1995). In the last definition, the concept is defined in terms of management, and the concept is confused with the definition of "Human Resources Management".

The term human resources was first used by the American economist John R. Commons. Economist John R. Commons mentioned the concept in his book "The Distribution of Wealth" published in 1893 (Commons, 1935). However, it was not until the 20th century that human resources worked as a department, and its role between employees and managers emerged. The job definitions of human resources working in businesses have changed over time and have been shaped according to the needs of the time. Human resources

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are important for organizations and businesses and are addressed in both the private sector and academic studies on the definition, development, and application of the concepts (Wang, et al., 2017).

Human resources play a key role in helping companies cope with the rapidly changing business environment and the growing demand for highly qualified employees expected in the 21st century. Especially in the globalization process, the importance of human resources in organizations and societies is increasing. However, the definition and duties of human resources and their use in today's meaning have been formed over time. The human resources unit has been affected by environmental and organizational factors, and its meaning and duties have changed. In the years before the 1980s, human resources operated in businesses/institutions as a department with only administrative functions. In the 1980s, it started to be seen as the main department that could contribute to institutional effectiveness and exhibit a proactive approach (Prewitt, 1982).

Technology is very important in changing and improving businesses and processing units. Businesses that can catch up with the development speed of technology use a strategic tool that can be used to surpass their competitors in a competitive business environment. The aim of this study is to explore the changing role of human resource management as a result of digital and web transformation.

HUMAN RESOURCE AND TECHNOLOGY

Technology is an increasing necessity in the business world. While digitalization has become a buzzword in the business world, it has also found a place in resource management and new working styles. Recruitment and training processes experienced by employees include remote and highly advanced approaches and a range of technological process (Konyalılar, 2022).

Technology generally deals with the methods or tools used to collect, process, store, and transmit information. Many businesses use technology to reduce operating costs and increase the efficiency and effectiveness of production methods. Technology has a significant impact on businesses and institutions. Technology helps production or service, tangibly or intangibly, especially in terms of making profits regardless of the size of the commercial enterprises and meeting the demands of the customers. A business's culture, productivity, and relationships are directly affected by technological

resources. In addition to the listed contributions, it also contributes to issues such as the security, privacy, and trade advantage of businesses' information.

The benefits listed below can be observed by the use of up-to-date technologies suitable for the activities of the enterprises;

- Effectiveness of business processes with technological tools or computer software,
- Businesses have smooth and regular data,
- Ensuring data security by protecting data with different cloud systems,
- It has many contributions such as facilitating vertical or horizontal communication in business processes (Legris, et al., 2003).

Technological tools and digitalization shape important functions and processes of companies such as accounting, payroll, and personnel management. Human resource management is a strategic asset for companies that contributes to competitive advantage (Schroeder, 2013). For this reason, the contributions of technology and digitalization to businesses are also of strategic importance for human resources departments. Digital technologies are playing an increasingly influential role both in the working lives of employees and in human resource management, which must be affected in many ways (Strohmeier & Parry, 2014).

Digital transformation plays an important role in the way companies engage with their customers, how companies run their operations, how they design their business models, and how they organize themselves (Westerman & Didier, 2015). In addition, the integration of digital technology into business processes has become crucial for the survival and competitive advantage of contemporary organizations (Bharadwaj, 2000).

LEARNING AND DEVELOPMENT IN HUMAN RESOURCES

For companies, it would be a better approach to address the definition of the concept in order to address learning. Learning can be defined as a process that results from experience and leads to change that increases improved performance and future learning potential (Ambrose, et al., 2010). In another definition, learning is defined as behavioral changes that result from experience functionally or mechanically as changes in the organism resulting from experience (Houwer, et al., 2013).

The concept of learning is a term that is frequently used especially in schools, universities, and where discussions are made. The concept of learning

is also an important concept for businesses or organizations. In particular, the defined concept gains importance for the human resources departments of the enterprises. While the job descriptions of the department are being made, the expression about training the employees is frequently used.

The concept of development is commonly used to express a particular state of progress or growth. It can also be used to describe a new and improved idea or product, or it can be defined as an event that sets a new stage under changing conditions (Harrison, 2005).

The purpose of learning and development is to improve or change the behavior of individuals or groups for the better, to share knowledge and insights that enable them to do their jobs better or to develop attitudes that help them perform better (Vinikas, 2022). Learning and development, when carried out correctly in businesses, have strategic importance in terms of improving workplace culture, eliminating skill deficiencies, and increasing employee retention rates.

Among the goals of human resources are to create an attractive workspace for qualified personnel and to connect good employees to the organization. Human resource management also establishes a competitive foresight that can guide the strategic advancement of goals (Mercin, 2005). Learning and development, one of the main responsibilities of the business human resources department, is to help the company grow while providing employees with the knowledge and skills they need to grow in their roles.

The global workforce is constantly evolving due to several factors. These factors can be listed as the ever-increasing competitive business environment, and developments in technology and digital. Along with the secret developments, the competencies and skills required from the employees have changed due to factors such as government policies, global, political, and economic changes and developments in the field of health, the existence of a multi-generational workforce, and the short shelf life of knowledge.

Finegold and Notabartolo (2010) addressed general competence for the 21st century in five categories. These include analytical skills, interpersonal skills, executive ability, information processing, and change/learning capacity (Finegold & Notabartolo, 2010). The listed competencies were also discussed by the Organization for Economic Co-operation and Development (OECD), and emphasized that they are necessary competencies for those working in the 21st century (OECD, 2000).

The US Department of Labor has clarified what general qualifications are required for the job in the Secretary's Commission on Achieving Necessary

Skills (SCANS) report. According to the report, there are five competence frameworks for success in the modern workplace, built on three parts: key skills and personal qualities. The ability of individuals in the workplace to use the listed resources efficiently has been shown as a criterion for success. These; resources, interpersonal skills, knowledge, systems, and technology. In addition, the listed competencies include basic reading, writing, arithmetic, speaking, and listening skills; thinking skills such as problem-solving and reasoning; It was emphasized that it should be supported by personal qualities such as individual responsibility, sociability, self-management, self-respect, and integrity (U.S. Dept. of Labor, 1991). In light of these reports, it can be argued that the capacity to learn from secret competencies is one of the five characteristics expected from employees in the 21st century, and the concept of development for other secret competencies has been repeated frequently. For this reason, the expectations of today's business world from employees will be directly proportional to the search for competence listed. The unit that monitors the process for businesses is human resources experts. In order for the experts to include the employees with the most suitable competencies for the vacant position, they should first follow the current developments and ensure inter-departmental communication. Apart from this, human resources specialists should follow not only their new employees, but also their existing employees. Apart from this, human resources specialists should follow up with not only new employees but also existing employees. Human resources professionals often serve as problem solvers, with responsibilities ranging from organizing payroll to managing employee relations, as well as recruiting. Human resources management and training focus on learning and development, as well as professional development and skill development of employees. With human resources training, they aim to fill learning gaps, evaluate employees, and create learning solutions that help employees do their best. While using the listed activities, the use of technological tools and equipment provides solutions that facilitate the process. It is necessary to establish information management systems in matters such as archiving and monitoring employee information and determining the training to be created. The use of internet-based cloud systems by experts ensures the sustainability of the activities while keeping the information up-to-date and providing accessibility. In addition, the software systems used are also important for the process, and the fact that companies have established their technological infrastructure and their supportive attitude towards their use will facilitate the business execution process of human resources specialists.

METAVERSE CONCEPT

Digital platforms or virtual places are playing an increasingly important role in today's human life. This situation has also changed the environments in which people spend their daily time. With new versions rapidly changing, smartphones have become more powerful and all-encompassing. Thus, it has led to increased user adoption and an increase in daily screen time. According to the Digital 2022 Global Overview Report published in partnership with We Are Social and Hootsuite; In the report, which stated that the world population was 7.91 billion in January 2022, and more than two-thirds of the world's population, approximately 67.1%, uses a mobile phone (We Are Social, 2022). In addition, the average person spends 3 hours and 15 minutes on their phone every day (Howarth, 2023). Again, the Digital 2022 Global Overview Report announced that the number of global internet users reached 4.95 billion at the beginning of 2022 and there were 4.62 billion social media users worldwide in January 2022. In addition, the report states that almost 1 in 4 internet users between the ages of 16 and 64 now use social media for work-related activities. On the basis of the glazed data, it can be stated that screen time has increased (We Are Social, 2022).

In addition to the formations such as the internet, the use of technological tools, and digital games, another popular concept has emerged recently. This concept is called Metaverse in the international literature. Although the Turkish equivalent of the concept is not clear, the meaning of the concept is discussed (Terzi, 2022). The term metaverse is used as an abbreviation of meta-universe and means fictional universe. Metaverse is seen as one of the technologies of the future that is of particular interest in the context of the potential migration of people from the real world to digital or virtual places (Coulson, Oskis, Spencer, & Gould, 2019).

Metaverse is conceptualized as a new type of augmented reality service that offers users a spatial and immersive experience using advanced technology (Hollensen, et al., 2022). It also provides a virtual sharing space that blends the physical and digital worlds, allowing users to create and edit virtual content. The metaverse, called the new internet, is designed to be a virtual universe where people can have fun, socialize and even work. In order to understand the importance and place of the concept today, it would be appropriate to talk about the development of the internet. The internet, which is a global network of billions of computers and other electronic

devices, has become what it is today. The eras of the Internet were defined by the Web, short for World Wide Web. The periods and characteristics of the internet are given in Table 1.

Table 1: World Wide Web Platform Generations and Features

WEB Generations	Validity Years	Features
WEB 1.0.	1990 – 2000	It is used to describe the web technology used in the early days of the Internet’s discovery. It can be described as the first generation of the worldwide web. In this period, the Internet was used as a web technology in which the user communicated with the computer in one way.
WEB 2.0	2000 – 2010	It is used to describe the era when web technology offered a collaborative environment. In this period, a dynamic and two-way connection platform has emerged in web networks, where users participate in content production and sharing. It is the period in which the structure that activates the users with features such as providing information, producing information, sharing, and discussing, apart from the location of the users who only receive information, is formed. It defines the period when social media came to the fore, web log (blog) sites with features and functions, and social media emerged, in which access to information, organizing information, and sharing information were prioritized.
WEB 3.0	2010 – 2020	It points to a web environment where the control of the Internet is out of the hands of humans, data is structured and labeled so that it can be read directly by computers, interpreted with software solutions such as artificial intelligence approaches and techniques, and made intelligently. For this reason, this period can also be defined as the semantic web period or the period when machine learning developed. Web 3.0 is a decentralized and individual-oriented version of the internet, offering a self-sovereign digital identity.
WEB 4.0	2020 – 2030	Besides smart web applications; now defines a web environment that dominates every aspect of human life. Web 4.0 is a web technology where internet-based computing, that is, cloud computing applications, come to the fore in the storage of personal files, data, and content, everything from the operating system to all applications is built entirely on virtual networks away from physical disks, and real and virtual are intertwined.

Kaynak: (Brügger, 2012; Kollman, 2020; Ibrahim, 2021).

The term metaverse is not new, although it has been a popular concept lately. It was first expressed in 1992 by Neal Stephenson in his science fiction novel Snow Crash. In his book, Stephenson described a fantasy universe where users have computer-generated bodies, go shopping, spend time with friends, attend concerts, and generally have fun. In his book, Stephenson spoke of the metaverse as a digital world that encompasses everything that exists parallel to the real world. This defined universe corresponds to the concept of metaverse today. Also, among all Web generations, it coincides with the Web 3.0.

The Metaverse is a vision of what many in the computer industry believe is the next iteration of the internet: a single, shared, immersive, persistent, 3D sandbox is presented where people experience life in ways they cannot experience in the physical world (Mystakidis, 2022). Today, the concept is being developed and tried to be adapted to different uses. For example, Mark Zuckerberg, the founder of the Facebook application, changed the name of Facebook to Meta, rebranding the company. He explained that he made this change by stating that the concept of the future of digital is vital for improving the user experience. He also explained that he made this breakthrough in order to carry the concept of metaverse to the mobile internet (Ghaffary , 2021).

Metaverse and Business World

Metaverse provides a virtual sharing space that blends the physical and digital worlds, allowing users to create and edit virtual content. Digital technology has begun to be adopted by companies faster. Especially due to the COVID-19 pandemic, digital technology, including automation and artificial intelligence, has begun to be used faster. The technology used to control costs or combat uncertainty is a key element in warehouses, retail stores, call centers, and manufacturing operations to reduce workplace congestion and meet increasing inventory demand. The pandemic and ongoing economic barriers have also affected overall workforce trends, forcing companies to shift to flexibility and lifestyle-focused opportunities.

The new internet, the so-called metaverse, is designed to be a virtual universe where people can have fun, socialize, and even work (Laeq, 2022). The concept of metaverse has been used in recent years, especially with a marketing strategy. There are brands that the concept corresponds to and are currently implementing. For example, companies such as Roblox from the digital game brand, NVIDIA, and Microsoft from technology companies are among the brands that apply the metaverse. These companies create virtual worlds with virtual or augmented reality technologies (Ghaffary , 2021). In this section, how metaverse technology is used by brands and for what purpose it is used will be explained.

L'Oréal Group, a cosmetics and beauty company, has announced that it will use TikTok and Metaverse applications to take advantage of artificial intelligence and data. The brand explained the reason for entering these applications, what they do to create new sales and consumer interaction opportunities, and digital innovation on behalf of the Company. The Group has announced that it has invested \$4 million in the metaverse or web3 world (Bain, 2023). Asmita Dubey, the brand's digital and marketing officer,

explained that the company's reason for investing in metaverse technology is to go beyond storytelling in line with the values of inclusivity, diversity, and sustainability, and to support and strengthen the ecosystem that will build the metaverse by paving the way for progress towards branded story life (Dominguez, 2023).

Nestlé Purina Petcare brand, a pet food manufacturer, has launched an initiative to use metaverse technology to provide a personalized product range and easy display of products in its stores in order to improve customer experience and customer satisfaction. The brand has announced that it is turning to this space to help retail partners meet as avatars and map store planograms in an area the company calls the metaverse (Carlton, 2023).

Coca-Cola Company, a beverage brand, entered the metaverse world through digital games through the Coca-Cola Creations program, an innovation platform. The brand has developed its Zero Sugar Byte product for the digital game world called Fortnite (The Coca-Cola Company, 2022). Thus, they announced that they want to carry their brand sustainability to the digital dimension by moving their brand to the virtual universe. The brand has many initiatives towards digital technology. James Quincey, CEO of The Coca-Cola Company, stated that the brand has more than 1,500 innovation initiatives planned for 2022 (The Coca-Cola Company, 2023). The brand also undertakes innovation initiatives on behalf of the companies with which it works with its own company. It continues its initiatives to digitize the business to engage consumers more effectively while developing projects to accelerate digitally less-developed retail partners (Johnston, 2022).

The examples outlined above are examples of successful marketing of what companies can do with the metadata warehouse. But it is clear that there is much more untapped potential of the metastore to transform companies for the better.

CONCLUSION

Based on the metaverse concepts defined, the metaverse is not a place, a company, or a service. Metaverse is a digital space and has higher engagement and greater opportunities. Metaverse users can take part in an alternative, online universe that virtualizes, enhances, and diversifies all real-life experiences. For this reason, when defining the concept, it should not be considered only as individuals-oriented. This virtual universe also includes the latest technological developments for businesses or institutions. With Metaverse, the customer experience process can be supported. The company's customers can try the products without purchasing and share

their experiences with other consumers through the virtual universe. It can become interesting for consumers by bringing a new dimension to the shopping experience. In addition, another prominent situation for companies is that companies can carry out expensive, risky, and long-term jobs in the real world to the virtual universe and finalize them faster, thus saving companies in terms of finances and energy. Another importance of the concept of metaverse for companies is that it offers cooperation. What is meant here is not the company's cooperation with its internal stakeholders. It brings together employees, investors, customers, and business partners to create a metaverse environment together. It has great potential for individuals and institutions to be used as a metaverse education tool with its hidden benefits. By offering a new educational environment, Metaverse can offer an educational environment enriched with technologies. It can make education interesting by offering immersive distance education with a gamified learning environment. With the educational side of learning, people's learning and development can be monitored. Thus, it creates a large data store with employee participation in the processes. Although there are examples of successful metaverse initiatives for businesses, there are no academic studies on business departments. For this reason, first of all, businesses should start initiatives to be included in metaverse technology, create a virtual world that includes internal and external stakeholders in the horizontal and vertical direction, or integrate into existing virtual worlds. At this stage, human resources should be the biggest follower and supervisor of this initiative in ensuring the participation of employees.

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PERFORMANCE MANAGEMENT VIA METAVERSE

Zeliha ILGAZ*

INTRODUCTION

Human resources and all strategic management processes that are being implemented related to it have transformed with technology and today all organizations have become important practitioners of this process. It is important to integrate these studies into the entire body of the institution in businesses where digitalization efforts are gaining momentum day by day. Accordingly, strategies that are open to information, eager to learn, not afraid of change, and, on the contrary, transforming are expected from businesses. The human factor, which will play an important role in the successful implementation of these strategies, constitutes a primary field of study.

People adapt to technology very quickly and integrate with technology when we focus on today. Organizations and institutions also need to make the right moves in order to successfully manage and internalize these new formation processes. As a result of this situation, the traditional human resources management process has shifted to the orbit of the digital field. In the new work areas brought by these new formations, the organizations' ability to manage their performance management processes correctly, and maximize employee performance is again related to the correct interpretation of the process. It should be known that since it will not be enough to use technology alone in making decisions about employees and business processes, studies that integrate with technology will make a difference. Institutions that want to preserve their existence with future-oriented studies should place digital technology at the center of their business in order to keep up with the digital age and ensure its sustainability (Kişi, 2018). They will be able to achieve this not only by taking advantage of the possibilities of technology but by

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integrating them into their way of doing business. This integration process will take place with the successful completion of the transformation.

While the impact of digital integration on institutions and the performance management process of these institutions is increasing rapidly, Metaverse, which is one of the main studies of many important organizations today, constitutes an important field of study in this process. Revealing and evaluating the maximum efficiency of employees in this field among the structures transformed by advanced technology is very effective in terms of the sustainability of businesses. In this part of the study, performance management in Metaverse will be discussed within the framework of the above-mentioned elements.

New Concepts and Formations in the Digitalization Process

Human capital; covers the knowledge, skills, and abilities of the employees. Therefore, for businesses, the question of how effectively they can use the human resources they have is the most important question of intellectual capital is one of the subjects. Creativity is the leading factor that shows how effectively human resources are used. Innovation is coming for this reason, human capital covers a wide range from research and development to customer relations a source of creativity for a business in the field (Konyalılar, 2022). The 'Human' element in an organization has reached a much more important position with the introduction of a strategic approach to the traditional personnel management concept and the beginning of studies on human resources management from various perspectives. According to Bayat (2008), who emphasized the 'strategic' nature of human resources management in this context, human resources management is the implementation of harmonious and complementary practices and policies, such as selection and placement, training and development, motivation, and employee loyalty, which link human resources management with the strategic goals of the organization in order to improve organizational performance and provide a competitive advantage.

With the rapid development of technology and the increasing number of factors that will trigger this development, the transformation of human resources within an organization has gained a new quality. As a result of the effects of the COVID-19 pandemic, which entered our lives at the end of 2019 and shook the whole world, the place of technology in our lives has become significantly evident. The transformation of institutions and employees in

this process constitutes separate areas of study. With the development of important software that determines the changing ways of doing business in this transformation process, the concept of 'agility' has come to the fore in institutions. According to Rigby, who defines agile as an understanding and method that aims to develop innovation skills through intensive collaboration with customers, adaptive testing, and learning, agile teams are individuals with different functions dedicated to innovation (2019). In this way, it is a supporter and developer of every new opportunity that may occur in the future, although it covers the existing one in terms of its conceptual structure.

As a result of the increasing importance of the concept of agility in organizations and especially the development of technology with faster acceleration than usual, the concept has started to find a wide application area. While this concept is an important trigger of digital transformation, it enables organizations to reveal their presence in new Universes. Thus, the digital transformation process enables the employee to participate in the working universe with different tools, regardless of location. Larkin (2017) examined the digital transformation of human resources under three main categories; inward, outward, and across. In industry, inward, where the expectations of the employees are categorized, an intranet infrastructure similar to social media and online shopping experiences is expected for the motivation of employees. Outward will be able to work with multi-use of mobile devices from anywhere. And finally, the across will encourage cooperation, creativity, and new strategy production as it has never been before. It is seen that the ultimate goal of many approaches introduced is to develop new fields of study in which all strategies are integrated.

Performance Management and New Rules

Traditional performance management processes have also undergone a significant change with the development of technology and the gaining weight of digital studies. First of all, it will be important to define the personnel as the most important component of performance management and to determine performance management with its changing aspects with the transformation process. Koroğlu defined personnel as a person who describes all employees in a workplace and is used in employment (2010). As the roles of these people in the organization change with the conditions of time and technology, the prominent points in performance management are also changing. Performance, on the other hand, is a concept that quantitatively

and qualitatively determines what is achieved as a result of purposeful and planned activities, and can be explained as absolute or relative (Özer, 2009).

The roles of people in an organization and the transformation of these roles with digitalization are also the most important factors in revealing the components of performance management. According to Smither & London (Eds.), Performance management, which aims to increase the performance of the employee, as well as job satisfaction and commitment to the organization, and the performance of the organization, refers to an ongoing process that includes setting (and aligning) goals, coaching and developing employees, providing informal feedback, formally evaluating performance, and linking performance to recognition and rewards (2009). With the aim of increasing performance, it is possible to ensure that the employee reaches the desired high performance and exceeds stretching targets for the delivery of productivity, quality, customer service, growth, profits, and shareholder value (Armstrong & Baron, 2005).

It is seen that the rules of performance management in the evaluation system have changed over time or are obliged to change. Traditional performance management processes, especially long-term evaluations and performance feedback in this context go through a multi-step process. It turns out that in the transition from traditional processes to digital processes, these applications are abandoned first. As individuals began to work on shorter-term projects at different lengths, often in different teams led by different leaders, it became meaningless to receive feedback on performance from a single manager once a year (Cappelli & Tavis, 2019)

The transformation of performance management along with digitalization has led to the revision of many more norms, especially those listed above. In this context, organizations are expected to integrate certain rules into the Human Resources process in order to achieve an imagined level of performance. In the report published by Deloitte in 2017, the areas that were revised in a general way were stated.

Table 1: Performance management: Old rules vs. new rules

Performance appraisals and goal-setting are to be conducted once per year	Check-ins are to be conducted quarterly or more frequently; regular goal-setting occurs in an open, collaborative process
Feedback collected by manager at end of year	Feedback collected continuously and easily reviewed at end of the year (often through apps and mobile tools)
Goals are kept confidential with a focus on individual achievement	Goals made public and transparent with an increased focus on team achievement
Employees evaluated by their manager	Managers also evaluated by their employees
Employees force-ranked on a quantitative scale	Employees rated on a qualitative scale; rankings considered, not forced
Compensation is kept confidential and focused on equity; bands based on performance ratings	Compensation levels are more transparent, more frequently discussed, and focused more on pay for performance than on equity
Managers focused on evaluating performance	Managers focused on coaching and developing people
One leader evaluates each individual in a qualitative, opinion-based process	Many contribute to an individual’s performance evaluation; evaluation draws heavily on data
The process is considered to be a burden and a waste of time	The process is agile, faster, continuous, and lighter

Source: Walsh and Volini, E. (2017). Rewriting the rules for the digital age.

Among the other important topics that stand out in Deloitte’s research are giving feedback at short intervals and the transparent conduct of this work. Global labor standards have a great impact on the transparency issue coming to the fore. With the world becoming more integrated, people want a voice in other areas, and their demands for transparency are increasing with globalization (Florini, 2000).

The role of the manager and contributing to development by coaching is another prominent finding. According to Whitmore, the coaching approach provides an environment where learning, innovation, and awareness, as well as action and accountability, can be attempted simultaneously (2017). This approach also allows for collaborative learning and for employees to create new values. Team success has been seen as much more important than individual success, and reverse mentoring has also come to the fore in leadership processes. In other words, the perspectives of the employees toward the leader have been an important element in the performance evaluation. Thus, it is important to create a system that will highlight quality work rather than quantitative data in performance evaluation methods.

With the development of advanced technologies and related tools, we have entered a period where performance data can be managed much more easily and effectively through digital tools. Again, the prevalence of these

tools all over the world with globalization spreads the transformation of performance management processes to a wide environment. Digital tools, which find global application in organizations today, offer new and location-independent workspaces. At the same time, organizations are accelerating the development of technology by focusing on applications in new work areas. As one of these new universes, Metaverse appears as a field of study that organizations focus on the most today. While performance management leaves the old rules behind in the focus of the aforementioned digitalization and global spread, how to implement the new rules in this universe and achieve high performance will be an important research topic for organizations.

PERFORMANCE MANAGEMENT & METAVERSE

The evaluation of performance management within the scope of Metaverse constitutes the main framework of this section. Although subjects such as human resources processes, performance management, and performance evaluation applications have not yet found a new and widespread research area for Metaverse, working in Metaverse and creating value in subjects such as human resources and performance management is gaining popularity. In this section, it is aimed to discuss the performance management process in Metaverse. This will be discussed by focusing on the different perspectives of digital tools and concepts that have different effects from the past to the present. In other words, all the concepts and applications that we have discussed together with the digitalization process will focus on what kind of meaning they will gain in an area where the traditional and virtual are integrated.

As the first and most important component affecting the performance management process, information will be given about the working environment and the differences and opportunities offered by this environment. In the next part, the transformation of performance management will be discussed. Increasing performance management, which is the ultimate goal of performance management, will be evaluated within the scope of changing opportunities and variations.

Working Environment in the Metaverse

There have been significant changes in the spread of digital tools, globalization, the change in the way organizations do business, the common and purposeful performance of employees, and performance management

and evaluation processes. While these changes were discussed in the previous section, especially within the framework of the new rules, in addition to all these, the factors to be created by the 'working environment' in Metaverse are the most important outputs.

Metaverse is a perpetual and persistent multiuser environment merging physical reality with digital virtuality, which is a post-reality universe (Mystakidis, 2022). It provides an immersive experience based on extended reality technology, generates a mirror image of the real world based on digital twin technology, and builds an economic system based on blockchain technology (Deng, Weng & Zhang, 2022). Therefore, in order to internalize the integrated structures in Metaverse, it is important to try to analyze the meaning that the structures create independently from this universe. In particular, human-based elements are important in the meta-universe as in every field. For people, every element with which they can build this structure is necessary and valuable, since all the elements with which they interact are accompanied. According to Danielle Maurici-Arnone, global chief digital and technology officer at Combe International, the focus of creating an immersive experience is the human connection and experience with the product, while being on the Metaverse is based on the idea that users are always where they are (Wolpin, 2022).

Metaverse emerges as an area where many very comprehensive and complex structures are intertwined. According to Ning et al., (2021), Metaverse, which stands out with the phenomenon of integration of technology, characterizes the concepts of multi-technology, sociality, and hyper spatiotemporality.

Multi-Technology: It covers Artificial Intelligence, Blockchain Cryptocurrencies, Computer Vision, Networks (5G), Edge Computing, User Interactivity, IoT & Robotics, Augmented Reality, Virtual Reality, Mixed Reality, Extended Reality, Automation Human, ecosystem, virtue environments, Metaverse Platform, Business Model Canvas (Meepung & Kannikar, 2022). When evaluated within the scope of a working environment, it refers to an area where all the applications revealed by advanced technologies work in a certain logical sequence and are supported by multiple tools simultaneously.

Sociality: Metaverse is a new type of social form. Metaverse includes economic systems, cultural systems, and legal systems, which are closely related to reality, but have their own characteristics (Ning et al., 2021).

Metaverse appears as a second universe that covers many activities, not only for socializing or playing digital games, but also for shopping, training and teaching, cultural interaction, working, and creating a new society as well as being a part of it (Arpaci, et al., 2022). It turns out that Metaverse has a very advanced structure that can offer similar opportunities to real-life experiences. In addition, this sociability expresses a phenomenon that can include the dynamics of business life in many ways. With the systems revealed by sociality, both the wheels of the economy can be fed and the employee as a social being can be fed.

Hyper Spatiotemporality: Hyper Spatiotemporality disrupts the limits of time and space and offers a free and immersive experience to users (Ning, et al., 2021). The mentality of working at Metaverse also focuses on this context. Users can find existence in another universe without the limitation of time and space. Only because it stands out with this concept, it combines not only a virtual working environment but also the real world. As the new perception of the space that has come with digitalization, hyper spatiotemporal is far beyond the physical view, touch, feeling, border, social relations, and spatial reality of man (Çiftçi, & Karakaş, 2019).

With the development of technology, mobile and online working issues have started to come to the fore. The COVID-19 pandemic, which emerged at the end of 2019 and brought a new order to the working conditions as well as to the whole world order in a short time, brought these efforts to a much further level. Offering people, the opportunity to work in a virtual universe, not only brings models suitable for the conditions of the time but also supports new working models that will shape the future. Perhaps the most important criticism of online working alone is the decentralization that occurs with the loss of space perception. The passing of internet technology through the vessels of digital tools and everyday life has universalized this homelessness, and the image saturation of the world has become a place of fictional reality and hyperrealism (Çiftçi, & Karakaş, 2019). Discussing the possible impact of Metaverse on urban space, Hamurcu focused on the aspects that distinguish working in Metaverse from working online. When it comes to working online, the uncertainties experienced by the users due to the loss of spatial perception are tried to be eliminated by the possibilities offered by the near-real space and, accordingly, the experience/interaction arising from the coexistence of the virtual and the physical (Hamurcu, 2022). The work in Metaverse and the performance based on it are realized in a

dualist framework. Thus, it does not fully cover the criticisms brought about by online work. Because it recreates the perception of space and presents a presence in connection with the physical. Therefore, it is necessary to focus on elements independent of online work in performance management processes.

Transformation of Performance Management

Performance management is an issue that all businesses care about, from traditional businesses to modern businesses, in order to reveal their general personnel targets. What is expected from the performance has changed, especially with the perspective of businesses on human resources and the change in the technical structure that affects this perspective, and this transformation continues continuously. However, economy, efficiency, and effectiveness are accepted as the unchanging elements of performance in the literature (Özer, 2009).

Performance management and what is expected from an organization's human resources management are handled through quite different points, especially in businesses built on digital infrastructure. When focusing on performance management through the metaverse, it will be necessary to reconsider the outputs of performance management within the scope of these unchanging elements and to put them in a form suitable for the rules of Metaverse.

Economy, in other words, thrift, predicts achieving the desired goal with the lowest cost resources and at the most appropriate time (Özer, 2009). If we consider this concept through the new tools and information systems offered by technology, it is seen that businesses still process all their data in accordance with this purpose. Time, which is one of the most important conditions for providing economy, reveals why businesses give so much importance to Metaverse studies. Because the conditions of the day may consider being in some universes as a part of their transformation. While today we focus on the efforts to take part in Metaverse and the strategies of these studies, it is envisaged to talk about the strategies of the organizations built entirely on this metadatabase in the future.

In its most classical sense, productivity expresses the balance between the economic structure of the organization and the outputs of this balance (Smith et al., 1983; Şahin & Balcı, 2022). It is especially concerned with what the organization has achieved in the final sense. Efficiency is used to determine

how close an organization is to the set goal by using inputs to a certain extent and effectiveness (Hosain, Arefin, & Hossin, 2020). Today, if we consider the concept of productivity in Metaverse, it will be necessary to look at the planning structure of the organization at the starting point and the return of the applications realized at the end. It is necessary to bring productivity to the highest level by revealing the correspondence of each work carried out in the meta-universe.

Efficiency refers to the extent to which an organization realizes its predetermined purpose with the policies, projects, and measures it takes, and shows the degree of success and robustness of the organization in achieving its goals (DPT, 2000; Özer, 2009). According to Aktan (2009), who evaluated technological efficiency within the scope of the concept of “innovation”, the extent of innovation and creativity in the organization can be determined based on criteria such as new inventions, new products, and the life cycle of products. It should be noted that Metaverse itself has many new and undiscovered inventions. Considering the structure of an organization that focuses on applications in metaverse, it is possible to say that all studies targeted in the field of human resources can be considered equivalent to the concept of technological innovation.

It is necessary to consider the transformation of performance evaluations that affect these elements, as well as the transformation of performance elements. According to Gass and Prince (1993), the performance evaluation process of the employees carried out within the scope of performance management takes place in seven steps:

- Establishment of working groups for performance evaluation and measurement
- General data collection about the organization and other preliminary studies
- Training of employees on performance evaluation and measurement.
- A “performance measurement model/system” should be developed for the organization
- Calculation of performance measurement systems
- Implementation of performance measurement systems and development of reporting process
- General evaluation of the work done, identifying opportunities (Aktan, 2009).

Developing technology, usage of environmental conditions, new opportunities, and challenges require a new perspective on performance management. Therefore, it is necessary to create an evaluation system that is suitable for its current requirements. This is achieved directly by the management of the teams that will directly deal with that job. If there will be a performance evaluation process that is planned to be carried out on the Metaverse, the importance of data collection and processing processes, depending on continuous learning, emerges. Again, these processes should have components that will adapt to the structure of each organization.

Transformation of Performance Enhancement

According to the literature examining the relationship between human resources and firm performance, there are three main perspectives. The relationship between HRM and firm performance has developed from (1) examining specific sets of HR practices, (2) examining a match between HR practices and strategy, to (3) examining the role of HRM in building and maintaining organizational resources and capabilities that contribute directly to a firm's competitive advantage (Ferris et al., 2007).

While the studies applied in the field of human resources carry out certain transformations specific to the periods, it is always important to reveal the main rules of the field. In other words, studies that need to be put into practice specific to the period should be researched. Today, in order to talk about human resources and performance management in Metaverse, it is necessary to investigate the specific features of the field. Afterward, it continues to apply the specific rules set forth within the framework of the principle of continuity, which is the main element of performance management.

After the new practices and rules in the field of human resources are revealed, these studies will need to be handled with an approach that integrates with the strategy. To sustain success, certain competitive strategies, such as competing on the basis of innovation or unique characteristics, typically require greater depth and breadth of skills and higher levels of commitment from employees; that is, some competitive strategies create greater discretion where employee competencies and talent are comparatively more important (Guthrie, Spell, & Nyamori, 2002). Commitment, which may result in the value created by the employees in the institution, has a very important role in terms of the future of the institution. In an area such as Metaverse, where the information universe is full of discovery, the value that employees will reveal can also change the direction of competition strategies.

Consumer package goods companies are now implementing innovative tactics to recruit and retain workers, such as more flexible work schedules, promotion opportunities that reward longer-term employment, and a variety of new incentives that try to accommodate changing workforce preferences, says Joseph Aquilina, senior director of the Consumer Brands Association (Dominguez, 2023). Thus, workspaces for talented employees and opportunities for job satisfaction are created. In the new environments that will be created by innovative works, high motivation-based performance can be expected from the personnel. In this way, an employee will consider the work environment aimed at creating a dynamic and common culture as a continuous development area for self.

In order to deal with the transformation of performance development elements in the in different universes, it is necessary to have a general knowledge of technology and human resources strategy. It can be said that the change in the general evaluation criteria until today is based entirely on technology and human integration. Biggs & Lee (2018) proposed a third balancing strategy that allows computers and humans to do their best, and where improving human performance is seen as the ultimate goal. According to Biggs & Lee, although human performance is the only constant element in life's journey, the abilities and opportunities that emerge today are changing. These opportunities are divided into three areas and focus on enhancing performance (2018):

1. Cyber ventures,
2. Human-machine integration,
3. Precision selection/training.

In order to create a working environment in Metaverse and to determine a roadmap for human resources strategy, it is necessary to pay attention to all the new rules of performance management and evaluation system at the intersection of these three elements. In other words, a successful management will be possible as long as these three elements are the three principles that organizations will base on in the face of new technological opportunities.

CONCLUSION

New concepts and practices, which have become widespread with the digitalization process, have also shown themselves in the performance management process. It has lost its validity with the inadequacy of the old

rules in the applications in the transformation process. While the effects of the new rules on the performance management process have increased, the role of strategic integration in the transformation process has been the main factor. Each new rule supports a new application and more strategic work while increasing the possibility of doing business in more environments. Opportunities in the metaverse environment, on the other hand, have to structure performance management processes by referencing the transformation of human resources within the framework of these new rules. This is also the main factor for the sustainability of an organization along with its strategic structure.

The new concepts and formations brought by digitalized human resources offer the opportunity to re-evaluate the performance management processes. Although the concepts introduced into the literature are increasing day by day, the concepts of agility and hyper spatiotemporality, which correspond to a working universe independent of time and location, appear as the first field of study for the transformation of performance management and its handling in different universes. In addition to these concepts, in Metaverse, as in every field, the human element takes precedence over all other components in terms of creating value. In this new virtual universe, a working environment is mentioned, if possible, it will be necessary to deal with the management and evaluation processes with balance elements that will contribute to this value to make it sustainable.

With the infinity of the information universe and the fact that new areas have not yet been discovered, continuous education can be mentioned. In this context, the training and knowledge of employees are other factors in the performance evaluation process. It will be possible to mention the establishment of new performance measurement systems for the unique applications of organizations. In addition to all these elements, since it is not possible to draw a border to this new universe -it is not yet an area beyond human imagination - it will be able to create a continuous field of opportunity. With the emergence of these unique opportunities, many more talented employees will be directed to the field and unexpected factors may arise in the performance management and evaluation processes.

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CAREER MANAGEMENT VIA METAVERSE

Çağla DEMİR*

INTRODUCTION

The dynamics of corporate life are changing day by day as a result of evolving technologies. There has been a shift in the way people work as a result of technology, particularly with the advent of remote work into company life after COVID-19. There has been some grouping of business processes into the Metaverse cosmos since Mark Zuckerberg introduced Meta in 2021. There are programs that enable multinational corporations to bring their human resources procedures into the metaverse.

In order to facilitate online recruiting and recruitment fairs, Deloitte, for instance, offers a virtual tour of their London headquarters. Any current web browser or smartphone can be used to access the tour (Kamaly, 2022). According to Gartner statistics, 25% of individuals will spend at least an hour each day in the metaverse by 2026. For Meta's HR director for Asia, Rachel Burton, this is already a fact in 2022 (Walters, 2022).

The competencies needed to have a career in the metaverse universe in the future, as well as metaverse professions, will be covered in this section of the book where we address the transformation process of the metaverse into human resources.

CONCEPTUAL FRAMEWORK

Career Management

The words "career" and "carrera" come from the Latin words "carrus" (horse carriage) and "carrera" (road), "carriere" (running track, arena), and "career" (vocation, professional life). Despite the fact that the idea of a career has been around since antiquity, it is clear that detailed academic research

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has been done on this topic and that it has been frequently discussed in the literature related to business administration, personnel management, and later human resources management, particularly since the 1970s (Çelik 2007; Dündar, 2009).

According to Taşlıyan (2011) organizational restructuring and change started to spread quickly in the late 1980s and early 1990s, and these changes had a big impact on organizations' policies and practices. In this context, career planning and development are more crucial than ever for the survival of organizations, the development of human capital, and the provision of a flexible organizational structure. These changes and innovations are the results of efforts to adapt to changing environmental conditions in terms of labor markets. Thus, the "career planning and development" role has grown to be one of the most crucial tools for restructuring and transformation in the area of human resources management, especially for large-scale businesses (Bursalı & Kök, 2018).

The fundamental principle of career management is to combine the needs of the individual with those of the company. The organization needs a talent flow, and career management offers that while also allowing employees to advance their careers and skill sets. In order to help people advance their careers for both their own benefit and the organization's, career management also involves career counseling (Armstrong, 2014). The company should support its employees in managing and planning their careers. Organizations utilize a variety of career-related initiatives to promote efficient career management, including career planning seminars, job advertisements, encouraging performance rating systems, career counseling and mentoring, and job redesign. Programs for career planning assist employees in increasing their interest in their work and improving or maintaining their employability (Greenhaus, 2018).

Due to the conclusions from the analysis of the data using big data and HR analytics, talent analytics is now a reality as a result of digitalization. As a result, choices about one's job path and goals for the future are directly related to the data in big data. By conducting quantitative analyses of all the available data, HR managers will have the chance to better understand the career interests of the employees and to better support their career planning and management. To completely assess an employee's career path, offer individualized career advice, and reduce talent turnover, organizations can combine traditional career management with big data-based career

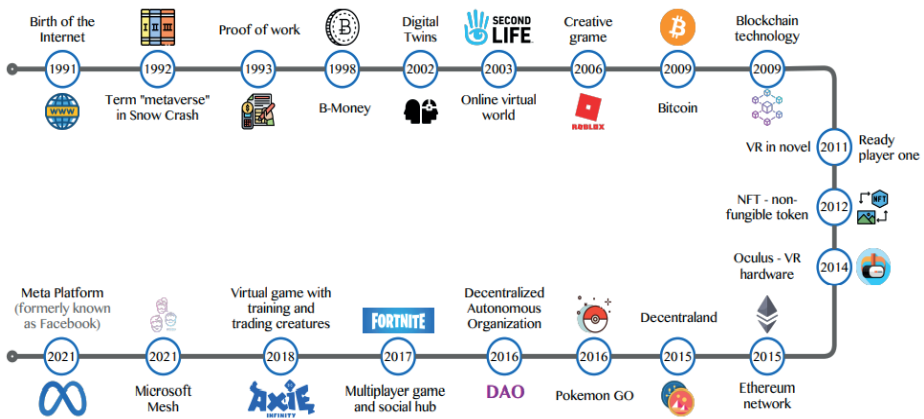
management. This creates a win-win situation for the organization and the employee (Faqihi & Miah, 2023).

Because of this, businesses nowadays use the chances offered by digitization to decide on professional paths and staff growth. It is undeniable that using artificial intelligence technology and the potential provided by the metaverse environment in the area of HR is necessary to keep up with the times and ensure the continuity of the organizations.

Metaverse

The concept of the metaverse is not new; it has been discussed for decades as the Internet and other technologies have advanced. The history of the metaverse is depicted in Fig. 1 and includes a number of important fundamental events, including the invention of the Internet, its first literary allusion, the creation of Second Life, and more recent metaverse initiatives by major technology firms like Microsoft and Facebook. The term “metaverse,” which was created by fusing the words “meta” and “universe,” was originally used in 1992’s cyberpunk novel Snow Crash to describe a virtual reality setting known as the matrix (Huynh-the, et al., 2023).

Figure 1. A timeline of the metaverse development involving primary events from 1991 to 2021.



Source: Huynh-the, et al. (2023).

Presently, the word “metaverse” refers to a shared virtual 3D environment or perhaps a number of cross-platform worlds that can provide users with a completely immersive environment filled with interactive and collaborative tasks. A metaverse is also referred to as an enhanced virtual environment created by fusing physical and virtual space, where users can

interact in augmented reality, virtually meet one another, and partake in virtual activities that mimic real-world experiences (Mohamed, et al., 2023).

Employees can enter and leave virtual offices and meeting rooms in real time with their digital avatars using the NextMeet platform. They can also visit a virtual help desk, deliver a live presentation from the podium, and unwind in a networking room with their coworkers. Participants utilize a desktop computer or mobile device to access the virtual world. They then choose or create their avatar and use keyboard buttons to move about the area—for example, arrow keys to move around and double-click to seat on a chair. Some metaverse businesses stand out with office solutions that lessen the social isolation of remote working and video meeting weariness. The UK-based startup PixelMax assists businesses in developing immersive workspaces that enhance teamwork, employee well-being, and cooperation (Purdy, 2022).

The way people work in all industries may or may not change as a result of the metaverse. But, compared to the way things are now, this reality offers HR professionals the significant potential to change how their organizations find, hire, and work with remote talent. In any case, as the newest teleworking technology and applications become available, forward-thinking HR experts are anticipated to take the lead (Kamaly, 2022).

Employees may work and interact from anywhere in the world as if they were in the same room because of the entirely customizable sandbox that Metaverse offers enterprises. The metaverse offers chances to efficiently handle HR procedures, including giving staff access through virtual headgear, setting up secure and inviting workspaces, and training them on how to utilize them (Randhawa, 2023).

The most sophisticated and interactive version of the internet is the metaverse. It offers a setting where staff members can talk to one another, exchange ideas, and take part in team meetings. With the integration of virtual reality, augmented reality, and mixed reality as well as the use of Metaverse to spark conversations and boost employee engagement, several firms have already begun the first phase of their HR strategies. For example; Accenture declared in April 2022 that it would use VR headsets to hire 150,000 new workers from the Metaverse. The virtual Nth floor has been developed by the technology consultancy company as a social and learning environment for staff members (Alug, 2022).

Career Management via Metaverse

The metaverse will be covered in this part under the titles of career planning and career management.

Career Planning

Career planning is a crucial component of career management since it determines how individuals advance within an organization based on assessments of organizational needs, employee success profiles that have been established, and the abilities, potential, and preferences of specific employees (Armstrong, 2014). Career planning has two dimensions. The first dimension will show itself in the personality of the person who is making professional plans. In order to decide where and how he wants to be in the future, the person will need to grasp his position in the workforce. This occurrence represents a healthy development for the person. The person, therefore, discovers the chance to design his own profession. The career in terms of organization, research, and orientation makes up the second dimension. By maintaining its own aims at the forefront, the organization is attempting to adapt individual goals to itself in this situation (Sabuncuoğlu, 1997; Tüz; 2003).

According to İltter (2021), the career process is a protracted one that involves a person getting to know herself and her surroundings, learning about employment and educational prospects, looking for opportunities to succeed, and planning all of these (Çetiner & Durmuş, 2022). The steps you need to follow for individual career planning in the metaverse are as follows; (Ray, 2022).

1. Gain academic knowledge; Computer Software Engineering, Graphic Design, Web Development, Data Science, and Artificial Intelligence.
2. Build the right skillset; Technical skills and programming languages learning like JavaScript, React, and TypeScript.
3. Intern; gaining on-field experience.
4. Build your resume, portfolio, and LinkedIn profile.
5. Apply for a job; start applying to metaverse jobs via platforms like Monster, and LinkedIn.

Career planning is the process of determining one's own career path in accordance with one's long-term objectives. The person who wishes to decide on a job in the metaverse area should prepare himself to adapt to technology both intellectually and practically.

Career Management

The goal of career management is to ensure that the organization has the talent flow that it requires. The provision of possibilities for people to develop their skills and vocations in order to fulfill their own dreams, however, is also an issue. It combines the requirements of the person with those of the organization (Armstrong, 2014). The focus, goals, and motivation of workers as well as their career ambitions continue to change as a result of technological advancements, which also cause changes in organizational structures. It makes clear the importance of picking up new abilities in fields that are crucial and controlled by technological advancements. The ability to develop the relevant abilities needed for a given job is empowered by digitalization. In order to refresh people's skills, it also reshapes professions in new directions (Wang, et al., 2022).

When we consider the skills needed to establish a career in Metaverse; (Kaur, 2023).

- **Technical Skills**

Above all, it's crucial to have a firm understanding of technology.

- ✓ 3D Modelling and animation tools,
- ✓ VR and AR technology knowledge,
- ✓ Python, C++, and JavaScript computer programming languages.

- **Creativity**

In addition to technical proficiency, creativity is crucial. This involves the capability to create captivating and engrossing settings, characters, and storylines. A background in graphic design, 3D modeling, or animation can be helpful in this situation.

- **Business Skills**

While the Metaverse is a booming market with numerous opportunities for expansion and innovation, marketing and business development abilities are especially crucial.

- **Soft Skills**

A career in the metaverse involves several soft skills in addition to these essential competencies. This includes strong problem-solving skills, good collaborative skills, and exceptional communication skills. Collaboration is key in the metaverse as projects usually involve cross-functional teams creating immersive experiences.

Contact with mentors, which is one of the important issues of career management, plays an effective role in how people manage their careers. Few businesses, meanwhile, actively pair employees with accomplished mentors in an effort to support their professional development. As a result, sensible professionals frequently look for “informal” mentors to offer advice and assistance throughout their careers. The Metaverse can serve as a platform that reduces “corporate noise” to promote cordial and productive interactions in a “private” setting, acting as a catalyst for the formation of strong ties between Mentor and Mentee (Mirza, 2022). Provide mentors and mentees the opportunity to communicate digitally through virtual mentoring sessions, digital voice platforms (such as Life [SL] voice, smartphones, video calls), or text-based platforms (such as emails, social media postings, SL chat posts), or text messaging discussion sequences. People engage in digital interaction with one another on the SL virtual mentoring island through the use of avatars that can speak (microphone) or have conversations (written communication) (Greg, et al., 2017).

New Job Alternatives to Make a Career via Metaverse

Effective metaverse job indicators in both the present and future employment markets are among the metaverse’s main benefits. It certainly seems enticing to have access to a virtual world where one may explore, develop, and own things while also having power over them. Metaverse will speed up business sector growth as it becomes more widely used over time.

Job opportunities in Metaverse;

- **Metaverse Research Scientist**

The position of a metaverse research scientist will undoubtedly grow in significance as metaverse thinking expands throughout the world. Scientists researching the Metaverse will offer ideas for visible and digitally usable worlds in virtual settings. In essence, this assignment calls for enhancing scaling and prototyping capabilities using various metastore technologies.

- **Ecosystem Developer**

The growth of the Metaverse involves a vast ecosystem with many interdependent parts. Developers of ecosystems collaborate with governments and others to guarantee the viability of every function at scale. For ecosystem developers, metaverse development offers a variety of job options.

- **Metaverse Hardware Builder**

A hardware builder for the metaverse is another important position in the metaverse. The task of assembling the hardware required to make the metaverse's digital experiences possible should be left to the hardware maker. Moreover, hardware designers should be able to modify their products to take advantage of recent advancements in the metadata store.

- **Metaverse Cyber Security**

Cybersecurity specialists can also find chances for career progression in the metaverse, because they can recognize how the metaverse is a vulnerable target for fraud, cyberattacks, and many other unanticipated repercussions.

- **Metaverse Planner**

By imagining a metaverse's general structure, planners of the metaverse must cultivate a strategic portfolio of opportunities. As they specify the capabilities of a metaverse, the metaverse planner essentially serves as the catalyst for metaverse adoption (Weston, 2022).

CONCLUSION

Companies should be aware of the intriguing new technology known as the metaverse. Whilst HR opportunities in the Metaverse are still in their infancy, businesses who take the time to assess real-world uses and the potential to use this technology to enhance communication within their organizations will be much more at ease using it to their benefit in the future (peoplehum, 2022).

HR executives should employ individuals with the skills necessary to build the Metaverse ecosystem for an organization's digital transformation, such as those with expertise in artificial intelligence, data analytics, etc. The platform vision should be developed at a level where technology executives can follow the future with understanding, appreciation, and vision. HR executives need to grasp the Metaverse and how it may support their efforts in hiring, learning, teamwork, career development, and other areas (Werder, 2022).

That is impossible to overlook the metaverse technology, which will give individuals the chance to significantly improve their social and professional lives. The perspective of companies and the adaptation of human resources staff to this new technology are both crucial in terms of investing in the future, particularly in commercial life. The younger generation of skilled workers is

more likely to be drawn to organizations that are open to new technology. It is undeniable that businesses that provide chances like remote employment, training in a metaverse setting, meeting with their avatars, and mentorship sessions are more likely to attract talent.

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TALENT MANAGEMENT VIA METAVERSE

Nurcan ÇETİNER*

INTRODUCTION

Today, it is seen that the transportation network and usage areas of the Internet, which has become an indispensable part of life both individually and institutionally, are increasing in number. Developed by computer programmer Tim Berners Lee at CERN in 1989 and called Web 1.0, the system was initially limited in terms of content and number of users. In the Web 1.0 system, it is seen that information is prepared and made available by a small number of authors, and only one-sided communication is allowed for reading (Naik & Shivalingaiah, 2008).

Along with the developments in technology, Web 2.0 technologies that offer online collaboration and sharing among users have been developed; it has been ensured that the Internet has become a structure allowing the use of many applications running on different platforms. The Internet, which has developed with Web 2.0 technologies, has become an environment in which individuals can actively share and prepare content (Kahraman, 2010; Vardarli, 2016). The Internet, which continues to develop since 2001, has used the information obtained from the searches conducted by users through search engines utilizing Web 3.0 (Semantic Web) technologies in big data analyses where artificial intelligence and fuzzy logic are used concurrently. In this way, it has become easier to collect the data necessary for organizations to increase customer satisfaction, determine and meet their expectations (Ersöz, 2020). The developments in the Internet network have also enabled the formation of the metaverse, which can also be described as “beyond the universe”, allowing individuals to acquire experiences beyond what they can realize in physical life.

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Similar to the effects of the change and development in mobile Internet technology, which has developed in parallel with the advances in web technologies, the rise of the metaverse has also affected many business models such as customer satisfaction, customer engagement, brand awareness, new markets, new customer preferences, innovation, and product development, and talent management can lead to far-reaching change. These changes are also an indication that institutions will enter a new competitive field (Gümüşlü, 2022).

The metaverse, which is constituted as a result of the widespread Internet usage, makes its presence felt in various areas including public services, education, health, tourism, and cultural activities, and this new virtual universe also affects the management processes of businesses. Parallel to these effects, the changes in the external environment of the organization and the effect of globalization rendered it necessary for organizations to take certain precautions and take steps to survive and gain strength in the competitive environment.

As is known, organizations that adopt the open system approach are greatly affected by the rapid changes in their environments. It is seen that especially the changes in the field of Internet and web technologies affect organizations to a great extent. It is seen that the leading enterprises in their field lost their leadership in the market, lagged behind their competitors, and even terminated their existence as due to failing to keep up with the changing market conditions in parallel with the changes. In line with the changes in technology, the expectations of the customers are also changing rapidly. To respond instantly to changing customer expectations, ensure customer satisfaction, and survive, it has become necessary for organizations to improve their organizational agility levels and adopt new working styles for the functioning of business life to keep up with the changes in their environments and gain competitive advantage (Akkaya & Tabak, 2018). As is known, organizational agility is the process by which organizations can quickly adapt to sudden and unpredictable changes in their environment (Basri & Zorlu, 2020). The competence dimension of organizational agility is a combination of responsiveness, flexibility, speed, and competence; it can be expressed as the ability and capacity to renew the existing or potential capabilities of the organization to adapt to this dynamic system experienced in its external environment (Çetinkaya & Akkoca, 2021). Indeed, human resources have a great impact on the ability of agile organizations to adapt

and renew their existing abilities in adapting to the environment at which they aim in terms of competence and development of organizational goals. In line with the development of new working styles to keep up with the change, employees demand flexibility and agility from the organizations they are affiliated with. On the other hand, organizations aim to obtain the best out of their employees by offering an agile approach (The European Business Review, 2022).

Organizations in the metaverse developed in parallel with the changes in the Internet and technology; they are trying to keep up with the change by developing new management approaches such as talent management, which is based on meeting the employees' demands for flexibility and agility, incorporating the potential workforce around them, raising and retaining the existing workforce, and managing the talented workforce. Moreover, they foresee that a great transformation can be exhibited in the direction of the employees' experiences with the metaverse (Gümüşlü, 2022).

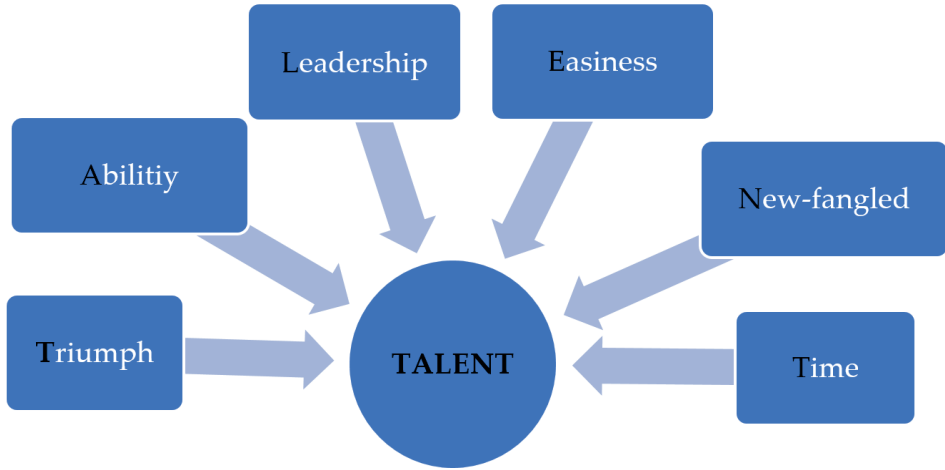
CONCEPTUAL FRAMEWORK

Talent Management

Human resources can be conceptualized as the skills and abilities of organizational employees to use implicit and explicit knowledge while performing organizational activities. As is known, organizations can achieve success if they can use information in the best way (Chatterjee et al., 2023). It is seen that organizations that aim for development and achieve a better position in the market by offering different products/services attach importance to human resources and adopt a strategy and management approach based on talent management (Aksakal & Dağdeviren, 2015).

Before explaining the concept of talent management, which is a combination of the concepts of talent and management, as an important element in the survival of organizations, examining the concepts of management and talent one by one will help to understand the concept more easily. As is known, management with its simplest definition can be defined as the ability to get people who have different needs, expectations, goals, and priorities to get a specific job done (Şahin, 2004). Talent; the ability of the employees of the organization to easily and creatively perform the tasks assigned to them within the specified time, involves achieving success, and ensuring that their teammates act in this direction. As shown in Figure 1, it can also be expressed as the entire concepts corresponding to the letters that make up the word 'talent' (Doğan & Demiral, 2008: 150-151).

Figure 1. Key Features That Make Up The Talent



Source: Doğan, S., & Demiral, Ö., (2008)

Today, performance evaluation, strategic human resource recruitment, learning and development, awards/recognition, growth, and talent management are among the main success factors of human resources units of organizations. With talent management, which is among the main factors, it is possible to attain the ways of effective management of the employees’ talents, attracting the talented workforce to the organization and obtaining a high level of benefit from them, thus, enabling organizations to benefit more from their existing workforce resources (Pepe, 2007).

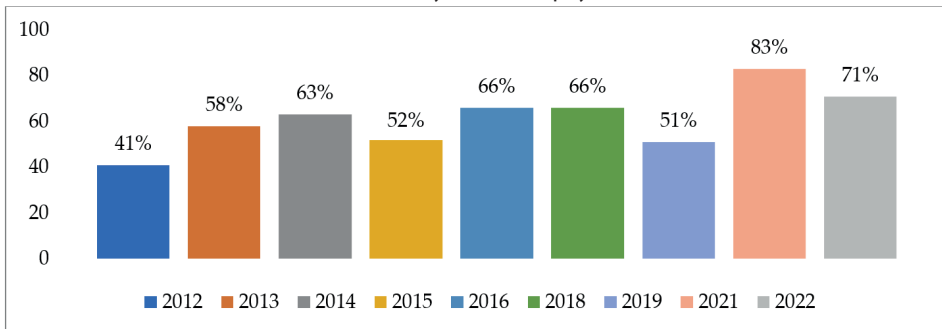
Talent management; involves the process of ensuring the exchange of information among employees, which is necessary for employees to display their knowledge-oriented skills and abilities, by using intellectual capital (Chatterjee et al., 2023). Talent management; which can also be expressed as a management process that enables organizations to effectively carry out their activities by evaluating their talents and discovering new talents to adapt to the ever-changing environment, cope with the difficulties they may encounter, and implement new strategies (Aksakal & Dağdeviren, 2015). Talent management is the entire activities aimed at planning the workforce that will support the competitive strategies of businesses, analyzing existing talents, determining other talents to be possessed, creating suitable working environments to attract new talents, employing the right talents, and retaining existing talents (Alayoğlu, 2010).

As can be understood from the definitions, talent management; is the entire strategic human resources management activities aimed at analyzing

and developing the capabilities of the human resource, which is the strongest resource that organizations can use to keep up with their developing and changing external environments, keeping these talents in the organization, and gaining new talents to the organization. In the metaverse, which develops with globalization and technological changes; with different applications such as virtual reality and artificial intelligence applications, it is getting harder for organizations to find talents that help them to stand out from their competitors and to keep them in the organization in a competitive environment that becomes more difficult with the inclusion of working life in the virtual world.

According to the report of ManpowerGroup (2022), from a global perspective, it **was** stated that 75 percent of employers had difficulty finding talents to meet their workforce needs. In the report, it was stated that the rate of the talent gap in Turkey was 71% as of 2022, the distribution of which is given in Table 1 by the year. Besides, depending on the technological applications that have taken their place in all aspects of life in the report, in the digital age we live in; it is stated that the needs of five basic human relations, which can be listed as reasoning and problem-solving, creativity and entrepreneurship, leadership and social impact, cooperation and teamwork, and taking responsibility, loom large.

Table 1. Türkiye's Talent Gap by Years



Source: ManpowerGroup (2022)

Talent management, which consists of three stages: *talent acquisition, talent training, and development, and talent retention*, has gained a new dimension in the field of human resources management through technologies such as virtual reality and artificial intelligence. The virtual universe, which attracts attention with artificial intelligence applications that make it easy to identify the needs and expectations of the employees, to identify their problems, and

to offer appropriate solutions, opens the doors of different alternatives to the employees, making it easier for them to be placed in a job suitable for their abilities, to exhibit and develop their talents (Demir, 2021). In the metaverse that employees are interested in, organizations; try to keep up with the change by developing new management approaches to meet the flexibility and agility demands of the employees, recruit the talented workforce, and develop and retain the existing talents.

Metaverse

Metaverse is a concept first mentioned in the novel *Snow Crash*, written by the American writer Neal Stephenson in 1992 when the researches are examined. This virtual world, which is expressed as the digital twin, where people work and play games in the virtual world freely designed, has attracted the attention of institutions with the branding of Facebook as Meta in 2021 (Lawton, 2022). In addition to the development in the field of internet and technology, the metaverse, where the usage area has become widespread due to the worldwide COVID-19 epidemic (Atabay & Aytekin, 2022), can be defined as the virtual world created by a computer in the simplest terms. The metaverse, where employees can develop their skills and diversify their social interactions by creating new and strong connections to meet their socialization needs; They are environments where users experience the feeling of being there tactilely and sensorial, without a physical environment (Gümüşlü, 2022).

Metaverse enables the use of many emerging technologies such as augmented reality, 5G technologies, virtual reality, the Internet of things, wearable sensors, artificial intelligence, blockchain, and non-fungible token (NFT). In addition to the development of these technologies day by day, the prevalence of use and ease of access led to an increase in interest in the metaverse, and the virtual world to become areas where realistic demands are met (Wang et al., 2022).

Metaverse is a virtual world where employees create, discover, and conduct real-time interaction with other employees who are not present in the same physical environment, allowing organizations to develop a more applicable and interactive workplace. In Metaverse, which is thought to fill the gap between both working methods in hybrid working methods, which is a combination of office and remote working, it has been concluded that 44% of the employees are willing to work. It is believed that this willingness will

greatly increase the productivity of employees, support interactive learning opportunities, and be the biggest supporter of employees in facilitating their busy work schedule (The European Business Review, 2022).

The penetration of the metaverse into life necessitates the development of new business models in terms of the business world. Businesses that notice the tendency of their target audiences to metaverses need to be more involved in these platforms. In line with this request, they aim to replace them in this changing and developing market by transforming their existing goods/services into digital assets. Indeed, they are also aware that their biggest supporter in keeping up with these changes and developments is to hire talented human resources who can use new technologies (Arslan, 2022).

Continuing its formation in parallel with the developments in the IT world, the metaverse, while offering innovative digital products and services for target audiences, has become areas where new business models can be developed and applied when examined in terms of organizations (Atabay & Aytakin, 2022). The metaverse, which allows virtual experiences in the real world, has important effects on working life as well as exhibiting its existence in all aspects of life. For example, Siyaev & Jo (2021) mentioned the use of metaverse applications in the on-the-job training of technicians. They stated that it will be easier to practice in a way that can be shared and updated with virtual planes that offer a life-like experience by maintaining social distance during the pandemic, especially in aviation schools that make use of old models. They stated that since Metaverse applications facilitate education, training, and knowledge sharing, they will improve the productivity, efficiency, and quality of service in maintenance processes by improving the workflows of technicians through mixed reality collaboration.

In line with the changes to be experienced with Metaverse, it will be necessary for institutions to make changes in terms of gaining potential customers, retaining existing customers and providing customer loyalty, and developing new methods and techniques related to these issues.

Metaverse Opportunities

The realization of work life, production, and experience applications in the digital world with Metaverse will significantly reduce transportation costs, physical resource consumption, and greenhouse gas emission rates. Thus, as positive effects, the decrease in resource consumption and less damage to nature can be counted (Gümüslü, 2022). It will help employees get rid of the

trouble of commuting and attending face-to-face meetings, and attain the free working conditions they need (The European Business Review, 2022).

Besides, thanks to the new Meta-education models, organizations can provide their employees with new professional knowledge along with the creation of a learning environment under equal conditions worldwide by eliminating geographical restrictions in education through metaverse-supported online distance education, online learning, online 3D virtual campuses (Mystakidis, 2022), and they will be provided with the opportunity to update their current professional knowledge.

Thanks to the metaverse, working environments will become happier places for employees, teleworker relationships and friendships will increase positively, cooperation will improve, education and information sharing will accelerate, and the need for a physically needed workspace will be reduced (Lawton, 2022).

Metaverse will help organizations to develop different working systems by breaking away from traditional ways of doing business. At the same time, it will facilitate working life through unconventional applications (Atabay & Aytakin, 2022). With the metaverse, which embraces new job opportunities for employees, jobs that previously required face-to-face interaction will be able to be carried out in the virtual world with freelance working conditions. At the same time, with the metaverse, physical occupational safety of working conditions will be provided and the spread of infectious diseases such as COVID-19 will be prevented (The European Business Review, 2022).

Metaverse Challenges

By allowing users to interact through virtual and augmented reality applications and technologies, which we can express as the key to entering the metaverse world, inevitably, issues such as access to many personal data such as facial expression, blood pressure, heart rhythm, eye movements, and violation of privacy will come to the fore. In the current situation, although regulations are made with the law on the collection of personal data and the protection of personal data, Metaverse will cause the aforementioned problems to grow and new ones to be added. This situation will reveal the necessity of regulating the interactions of organizations using metaverse applications with their customers and employees (Mystakidis, 2022). The transition to the metaverse world, requires updating on issues such as cyber security, digital rights, responsibility, and honest self-representation.

Considering that the electrical energy consumption rates, which are necessary for the active operation of metaverse applications, will increase, there may be a risk of insufficient energy resources (Gümüşlü, 2022). It is predicted that the metaverse, which we can describe as the important technological development of the future, may create negative effects on technology addiction and the mental health of users and employees, as well as a security problem. It is predicted that in the metaverse world, especially as a result of the increase in the usage time of virtual reality applications, it causes distraction in users, and also causes psychological problems due to information overload and the inability to prevent information pollution (Mystakidis, 2022).

Perhaps the most important disadvantage of Metaverse applications is the economic problem (Siyayev & Jo, 2021; Kuş, 2021). Among the economic problems are the high costs of the applications that make up the virtual universe, the equipment that enable these applications to be used actively, and the insufficient infrastructure. This situation is an obstacle to achieving the goals of mass use of the metaverse universe. It becomes important to identify the risks that may arise in the supply of equipment and products that will support this permanent digital universe, where thousands of people can move freely at the same time, and in the management of energy resources, and to develop and implement solution proposals as soon as possible (Narin, 2021). The fact that Metaverse becomes a technological reality and requires a new and very comprehensive infrastructure may lead to increased costs, and it will also make it necessary for organizations to face a negative situation such as not having talented employees who can use the technology in question. The change experienced in information, data, and digital roles with Metaverse creates intense competition not only based on companies but also across countries in terms of recruiting talented employees to their companies, and this may cause a talent gap (İlze, 2022). This situation will force organizations to develop new strategies for recruiting talented employees and retaining existing talent.

Talent Management via Metaverse

As mentioned before, in talent management, organizations take part to retain their current employees and recruit potential qualified employees. Metaverse applications, on the other hand, help employees to improve their work-related knowledge and experience by enabling on-the-job training opportunities to be realized with virtual tools that offer a realistic experience.

Talent management strategies in the metaverse are the process of determining the needs and qualifications of employees in the virtual world, such as virtual reality, augmented reality, artificial intelligence, and the Internet of Things, which are formed in line with technological developments, hiring employees who are suitable for the necessary skills, developing the skills of current employees, and ensuring the participation of potential talents in the organization.

Focusing on raising the brand awareness of the institution, developing new business models that will attract and connect the employees to the institution, attracting the attention of potential and ideal talents with different programs and workshops, rendering the company image more attractive and recruit different employees for different roles, and procurement processes are among the talent management strategies that can be implemented in Metaverse (İlze, 2022).

Recruitment will also differentiate through the technologically revolutionary metaverse that will change the social lives of employees, learning methods, and the way organizations work (Atabay & Aytekin, 2022). In Metaverse, it can be easier to make boring and unpopular recruitment processes more attractive by using different methods in the identification and recruitment, and development of employees through artificial intelligence, virtual reality, or augmented reality applications. For example, with gamification applications in recruitment processes, candidates can reveal their talents and characters by playing games, and access to the workforce that meets the criteria sought becomes easier (Kutsal, 2018). In the metaverse universe, both the candidate and the interviewer will have the opportunity to meet in an environment similar to the face-to-face interviews carried out in physical environments through their avatars that are determined and shaped by themselves (Atabay & Aytekin, 2022).

In Metaverse, artificial intelligence applications designed to be used in job interviews and recruitment processes such as Mya, JobPal, MyAlly, and Debra chatbots can be used. Also, artificial intelligence applications such as HireVue and applications that work with video interview systems and aim to identify the most suitable candidate (Çetiner, 2022) can also be used as artificial intelligence applications that can make recruitment processes more attractive and effective in the metaverse. Metaverse can offer organizations a global talent pool that they can access through artificial intelligence, virtual reality, and augmented reality applications.

Moreover, with the metaverse, alternative options will be offered to employees in terms of place of work and working styles. This will prevent employees from being confined to a certain area. Changing the way of doing business of organizations that offer both office and remote working opportunities to their employees with Metaverse will help attract the attention of their current employees and talented potential workforce. Metaverse will enable employees to experience different experiences and this virtual world will provide employees with creative ways to collaborate and work together towards organizational goals. In addition, by cooperating with prestigious institutions within the possibilities provided by the internet network, employees can work together with organizations around the world. Seeing that employees who have the opportunity to participate in global projects can experience new experiences in their career development will help them continue to work in their organizations and motivate them to come up with more innovative ideas and practices. On the other hand, it will strengthen the hands of the employees of the organizations in their talent management strategies and will help them to retain qualified employees in virtual practice areas.

As is known, one of the most important areas that the metaverse will affect is the education sector. Metaverse, with Immersive Education technologies and online applications such as digital games, commercial games, simulation technology, virtual reality, and learning platforms that combine the virtual world with classrooms, can attract students' attention by giving them the feeling of being there and helping them develop their technical skills (Mete, 2022). With Metaverse, organizations will provide their employees with the opportunity to acquire new professional knowledge and update their current professional knowledge thanks to different learning environments through new Meta-education models. Training and development programs determined according to the needs and expectations of the employees will help attract the attention of qualified talents. On-the-job training will help increase the professional knowledge and skills of the employees and accordingly the productivity, efficiency, and service quality through the development of professional experiences and metaverse applications that facilitate organizational and professional knowledge sharing. On the other hand, meta-education models will greatly support the talent management practices of organizations, making it easier to bring new talents to the organization and protect the existing workforce.

CONCLUSION

The development of the Internet and the ease of access through smartphones, tablets, and computers have increased the rate of Internet usage and caused individuals to spend more time online. This situation has affected businesses as well as individuals' lives. Metaverse, which was defined as fictional about twenty years ago and can also be expressed as a simulation of the real world, refers to a virtual universe that covers all areas related to human beings through devices developed in parallel with the developments in the internet and information technologies and makes them think that they exist mentally.

The fact that this virtual universe, which has developed in parallel with the changes in the field of technology, affects organizations to a great extent, and in parallel with these changes and transformations in business life, the desire of the enterprises to adapt to new conditions pushes them to the restructuring process, on the other hand, their need to have talented employees is increasing. Organizations are aware of the fact that their most powerful resource in keeping up with this competitive and changing environment is to have and retain a talented workforce. This situation reveals talent wars, which is a new competitive element among organizations and makes effective management of talent compulsory. In parallel with this necessity, human resources management has evolved into a new process, and the management of talents, the supply, and the retention of the talent that can meet the need, rather than the management of the employees, has become even more important.

Metaverse has begun to be used in the field of human resources, which is mostly effective in the management of workforce resources, as well as the management of talent management processes (Demir, 2021), as well as recruitment, in-service training, performance management, wage management; It also shows that it will be effective on basic variables that reflect the organization such as organizational structure, employee profile, and organizational culture (Atabay & Aytekin, 2022).

Talent management continues its development in Metaverse. The interpretations in this study, which were prepared based on the existing literature and practices, will indeed develop and change in parallel with the studies to be realized and implemented in the metaverse area. It is predicted that the advantages or disadvantages that cannot be considered in parallel with the development of technology and the transition to the metaverse universe will diversify with further studies.

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HOW METAVERSE WILL TRANSFORM THE FUTURE OF THE WORKPLACE?

Mert TEMUR*

INTRODUCTION

About 11 years ago, a science fiction writer named Neal Stephenson mentioned the concept of metaverse for the first time in his book “Snow Crash”. Shortly after that date, Mark Zuckerberg announced the concept. (Koohang, et al., 2023). Metaverse concept; refers to the platform where practitioners’ various senses such as seeing and hearing are stimulated depending on the networks and interact with different practitioners with this stimulation. (Moro, 2022).

In this study, the emergence of the concept of the metaverse and how it will affect business life in the future will be discussed. Sectors that are thought to have critical value in terms of both importance and impact will be examined and evaluated. In this study; health, marketing, education, tourism, and accounting are critical sectors studied. Another issue addressed is; It is the point Facebook company has reached in metaverse applications and the designs it plans to do in the future. When considering the concept of the metaverse, especially the practices of transnational companies were taken into account. The reason for this is; that companies’ spheres of influence are broad in terms of both consumers and other companies.

In addition to the benefits that virtual reality platforms will provide to humanity, dangerous situations for humanity are also a subject to be discussed. In this study, the measures that businesses should take in order to avoid negative situations will be included in this study. In the conclusion part, all the positive and negative aspects of virtual platforms will be

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discussed. The points to which businesses will pay attention in the future will be mentioned. As a result, suggestions will be made to businesses that want to create a competitive advantage today, and in the future.

CONCEPTUAL FRAMEWORK

In this section, the definition of the concept of metaverse will be given. A framework will be created by considering the process from the first emergence of the concept to the present day. It is possible to come across various definitions of a metaverse in the literature. One of these definitions is the concept of metaverse as a platform where people create their reflections and communicate with other people through it. As a result of the interaction, it will be possible for people to explore different worlds (Periyasami & Periyasamy, 2022).

COVID-19 has enabled millions of people around the world to work at home by creating hybrid and remote working environments. Virtual workspaces were popular even before the concept of the “metaverse” came into existence. As the development of Metaverse platforms increases and their usage areas expand, the benefit to people will also increase. Augmented reality applications will increase the integration of the physical world and the digital world (Babu & Mohan, 2022).

In Light of Metaverse

Metaverse is formed by the combination of the words “transcendence” and “universe” and is accepted as the internet of the modern age (Cheng, et al., 2022). The concept was first announced by a science fiction writer. Neal Stephenson talked about the concept of a metaverse in this work named “Snow Crash” (O’Brien & Chan, 2021).

Metaverse refers to the design that brings together different virtual worlds via the internet. In this design, each virtual world has its counterpart in the physical world. Those in the physical world create social networks in the virtual world (Cheng, et al., 2022). The concept is in another study, defined as the ability to do everything without the constraints of space, time, person, and movement (Aydın, 2022). The French sociologist Jean Baudrillard, with the simulation theory he developed, for the first time put forward the differences between the concepts of “real” and “virtual”. Baudrillard has revealed the main discussion topics of the concept of metaverse with this work (Çelik, 2022).

Virtual designs, which are increasingly important, offer different experiences to users with augmented reality and virtual reality applications. Especially the applications on smartphones provide serious income to companies with millions of downloads. Two different examples of these applications; are Pokemon Go and Google Cardboard (Lee, et al., 2022). Moreover, modern companies are changing their names and even organizational designs to fit the metaverse. The most recent example of this situation is Facebook Company. The company changed its name to “meta” at the end of 2021. According to Mark Zuckerberg, this change will continue in the future, especially in the company structure (Köse, 2022). Similarly, Nvidia company’s executives underlined in their statement in 2021 that the most important goal of the company is to create a metaverse (Bilgici & Şişman, 2022).

As it can be understood, the importance of the concept of the metaverse is gradually increasing. Today, more than 30 years have passed since Stephenson introduced the concept, and the metaverse has a different meaning than the first day. In particular, the increase in financial value it provides to companies will highlight this digital universe in the future.

Transformation of Business Life

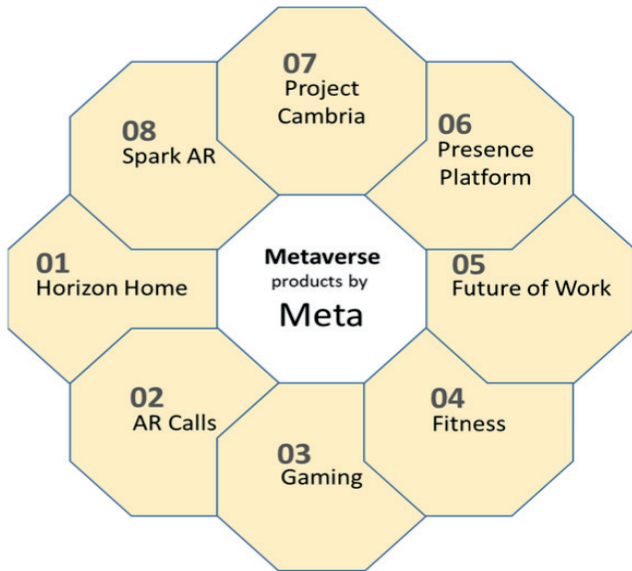
The 20th century is a period of intense technological developments. For this reason, it should be started to explain the concept of metaverse as of the 20th century. In this period, many innovations have been included in both social and working areas of human life. Phones, the internet, and smart devices are at the forefront of these innovations. Especially with the changing conditions in working life, many differences have occurred. Activities carried out in real life have been transferred to the electronic environment. The transfer of both business and social environments to the electronic environment has enabled words such as e-government and e-commerce to be included in our lives (Bourlakis, Papagiannidis & Li, 2009).

COVID-19, the biggest epidemic of the 21st century, has affected social networks. With the pandemic, the environments where people work together have disappeared. Communication activities have come a long way in this period. In the online environment; conferences, health applications, various social media activities, and metaverse applications have shown a revolutionary development. Metaverse applications, specially developed in the field of health, have offered testability in terms of showing the errors

and vulnerabilities that may arise in security issues before the health systems are presented to the physical world. All complex systems from a patient’s hospitalization to discharge were tested with metaverse applications and analyzes were made by developing different scenarios. Apart from the health sector, especially the stadiums, where people gathered, have been subject to various regulations with the metaverse. Bulk areas were tested with metaverses so that any disruptions that could occur during the events could be foreseen (Thomason, 2021).

After determining its name Meta, Facebook developed all its processes accordingly. It incorporated different metaverse applications into its structure. The deal with Ray-Ban Sunglasses Company is an example of this. In line with the agreement, smart glasses were developed. With these glasses, employees will be able to perform remote work activities and make augmented reality searches (Allam, et al., 2022).

Figure 1. Products of Meta Company



Source: Allam, Z., et al., (2022).

As illustrated in Figure 1, Facebook introduced its other products to consumers after announcing its name as Meta. Horizon Home, the first of these products, is a virtual reality environment where consumers can socialize with other people and enable remote communication. With AR Calls, another product, people will chat with more people in a virtual environment via text messages. Facebook company has also announced that it will offer games

to consumers on augmented reality platforms. These games will be the kind that will provide financial gain to consumers. With the effect of people being inactive during the pandemic process and the closure of gyms, Meta company creates a fitness platform that is similar to reality. In this program, people will be able to train as if they are in the gym, by determining the suitable work program for them. The future of work has been developed to coordinate games, fitness, and other applications created on the Metaverse platform on portable devices such as phones. The presence platform is an artificial intelligence application developed to enable practitioners to create more comprehensive products. Project Cambria, on the other hand, will be designed as a hybrid headset that provides augmented reality. All developed applications are intended to be accessed through this headset. Spark AR is a management center in which the impact areas and performances of the products will be transferred to different (Allam, et al., 2022).

Metaverse and the augmented reality applications developed accordingly have affected many the fields such as education, clinic, and games, as well as business areas that design health and communities to come together. This effect will continue to increase in the coming periods. In addition to these work areas, different companies will follow the augmented reality platforms developed by Facebook company for metaverse applications. These applications will both create significant investment areas for companies and provide convenience to users.

The COVID-19 pandemic that emerged in the past period has isolated all life. The whole world struggled to prevent the spread of the pandemic. Various measures were taken in this process. One of these measures was working at home, which has become popular with the pandemic. All meetings planned to be held in the office environment during the work-at-home process were transferred to the virtual environment. Live meetings, which are included in our lives during the pandemic process, began to bore those who attended the meeting after a while. This had a negative impact on the efficiency of the meetings. This is where the importance of Metaverse platforms comes into play. As the effectiveness of Metaverse applications in the design of businesses increases, their use in various meetings will also increase. Meetings held on augmented reality platforms have a high level of interaction. Participants feel as if they are in the same room as those in the meeting. This will also increase the efficiency of the meetings. Another positive aspect of virtual business environments involves the fact that office

space is designed as desired. Many elements such as the size of the room and the table arrangement can be designed. This designed environment can be used from anywhere. All of the users' information will be uploaded to the cloud (Blazek & Arnold, 2022).

In the following sections, the effects of augmented reality applications will be examined at the sectoral level. The sectors that are emphasized in the literature and that have a great say in the global economy are discussed.

Transforming Education With Metaverse

Learning is a process that has been sustaining since the beginning of humanity. This process is getting more and more important. With the use of information technologies, the learning process has accelerated. Education and learning activities will not only provide people with the opportunity to be good individuals, and thus, to have a place in society. These activities will also develop the talents and skills of individuals. In this way, social progress will continue. It is very important that education activities are continuous in order for the development of humanity to continue (Ahmad, et al., 2022). Considering that education is important at this level, it is clear that technological developments in the new period will affect this field. For this reason, the effects of metaverse applications in the education sector will be discussed.

Metaverse applications in education have a critical importance, especially in medical education. Increasing metaverse applications in medical education do not only support education. Applications also make a significant contribution to medical processes. Virtual surgery processes are created with various metaverse applications, allowing students to test the knowledge they have learned just as if they were in a real surgery. Augmented reality platforms contribute to the repetition of all processes related to the Operating Room and thus to the pre-definition of the problems that may arise. In addition to medical education, augmented reality applications will contribute to learning requiring various skills. Students will meet with various instructors located in different parts of the world in the Augmented Reality environment. The movements applied in the virtual reality environment will be followed and repeated by the instructors. Trainers will be able to make necessary corrections through the augmented reality application. In this way, efficient and effective learning will be ensured. Students will be able to develop their skills (Thomason, 2021).

The combination of various technologies such as virtual reality, metaverse, and artificial intelligence will bring various conveniences for students and teachers. There will be personalized trainings for students. In addition, teachers will evaluate students' education more easily (Contreras, et al., 2022). An augmented reality class called "Virtual Human" has been created at Stanford University. In this classroom, there is a structure where students can take lessons from every field. In this class, students will learn all the theories they have learned in practice and in positions available in real life. The learning here takes place entirely in the virtual environment. Education will take place in the museum, on the submarine, sometimes in a dangerous crater. Students will attend classes in the environments they imagine. Similar practices are used in aviation schools. Research studies on aviation accidents are carried out in these schools. These accidents are investigated with experience in augmented reality platforms. Students study conversations between pilots and air traffic control centers while observing various air crashes. Students can collect data about these accidents as in the real world (Lin, et al., 2022).

As can be seen from the examples, virtual reality applications have an important value in the field of education. In the future, the value of these applications in the field of education will increase gradually. Augmented reality applications will provide students with the opportunity to use their theoretical knowledge in practice. It is an important issue that metaverse applications become widespread in curricula and that applications can be carried out thoroughly.

In addition to all the positive aspects, metaverse platforms also have their downsides. Contact between student and teacher will decrease. Metaverse applications will not be available all the time and everywhere (Contreras, et al., 2022).

All educational institutions need to redesign their curricula and technical capacities to adapt to these changing conditions. Universities, in particular, should develop strategies to obtain health performance from augmented reality applications. For this, the necessary workforce should be trained. When universities determine their organizational designs in this direction, they will achieve optimum efficiency. Institutions that capture metaverse and human harmony will achieve more creative activities (Bühler, Jelinek & Nübel, 2022).

Transformation in the Health Sector

The use of metaverse in the healthcare industry is increasing. Augmented reality platforms are critical both during medical education and in the hospital setting. In the previous chapters, the importance of augmented reality applications, especially during medical education, was mentioned. The point to be emphasized in this section is the importance of the health sector in the field of application.

Metaverse applications are especially important for health professionals. Augmented reality designs are used as surgical aids today. Before the surgical operations, the heart rhythms of the patients are measured using 3D scanning tools and the patient is intervened when necessary before the operation. Moreover, the body temperature and blood pressure of the patients are measured through the 3D scanning device. Information such as the patient’s blood pressure, which is especially important in surgical procedures, is obtained by using augmented reality headsets. Most medical organizations use augmented reality applications. Thanks to these applications, diseases can be detected in advance and precautions can be taken (Mozumder, et al., 2022).

Figure 2. Medical fields where Metaverse is used



Source: Mozumder, M., et al., (2022).

In Figure 2, it is seen that metaverse applications are used in various medical fields.

Case Western Reserve University School of Medicine has moved education to a more active area by using augmented reality platforms. The “Hololens” device developed by Microsoft Corporation is used in the anatomy classes of the university. “Hololens” is a wearable device based on augmented reality. Students can examine the virtual view of different parts of the human body through the device. The invisible parts of the human body can be seen through the device. The application is practical and the application is simple to use. Students can see various images in detail by simply swiping the hologram on the device (Lin, et al., 2022).

Traveling with the Metaverse and Marketing Communication

Metaverse affects the tourism sector as well as areas such as health and education. The whole world has experienced a difficult period known as COVID-19, which emerged in China and has had a wide range of influence in recent years (Konyalilar, 2021). During this period, many prohibitions were implemented. One of them is travel bans. Travel bans applied during the pandemic process especially affected tourism companies. Travel bans and curfews have affected people as well as companies. During the period of restrictions, many companies created 3D designs of places people wished to see with virtual reality applications. Studies have shown that places traveled virtually are then revisited in the physical world. This is an indication that companies in the tourism sector will increase the number of their customers through metaverse applications. Using Metaverse tools, customer can visit places that they were curious about and could not visit before. This will be an important marketing activity for tourism companies. An example of this is Qatar Airways company. The company transferred the cabins of the planes to the augmented reality environment with the Meta-Human application (Koohang, et al., 2023).

Another area that the evolution of the Metaverse will affect is marketing communications. Metaverse applications have a lot of development potential in the field of marketing communications. The Metaverse universe offers the consumer a platform to be impressed with. In particular, advertisements will offer the consumer an experience that will be perceived by all senses beyond sound and vision. Studies indicate that consumers are more influenced by the advertisements they experience in the metaverse universe. This is a sign that organizations will benefit more from metaverse applications in their advertising activities in the future. Metaverse platforms have negative effects, as well as positive effects, on advertising activities. Augmented reality is currently in its early stages and apps have limited capabilities. Apps in their

prime will provide limited experience to consumers. Consumers exposed to limited experience will also be adversely affected by advertising activities (Koochang, et al., 2023). Another negative element is the vulnerability caused by the networks created by the platforms. While this security problem may cause the breach of personal data at the individual level, it will also create a problem for the security of organizations at the macro level (Anderson & Rainie, 2022). Accessibility is one of the barriers to building a successful metaverse platform. Most people do not have access to the high-end computers and virtual reality headsets necessary to experience the virtual world. This situation worries brands. Brands fail to engage in mass marketing initiatives (Babu & Mohan, 2022).

A Mysterious Field; Accounting and Finance

Metaverse is an incremental value. The number of companies turning to Metaverse platforms is increasing exponentially. This increase is accompanied by security problems. Metaverse has its economy within its structure. Entities in metaverse applications have a real-world counterpart. The most basic example of this is virtual contracts. The real equivalent of a contract that exists in the virtual world also exists in the real world. The main problem here is to create a safe space by keeping the records of this contract. Metaverse applications project a code to each entity in the virtual world. The corresponding code is in the real world. These codes are recorded with metaverse applications. In the long run, companies will shift to different investments in the augmented reality environment. One of these investments is to purchase different companies. Branches will be opened to these purchased companies. The importance of accounting in metaverse applications will emerge at this point. Recording of purchased companies and all investments will be possible through accounting activities. Accounting activities will increase security on platforms (Al-Gnbri, 2022).

The applications developed by the virtual world to ensure financial security are remarkable. Blockchain, Cryptocurrency, and Token are examples of these applications. The blockchain application is designed for secure information sharing and protection. The block chain application, which was established during the periods when the number of piracy attacks increased in money and information transfers, prevented the theft of information. Blockchain technology is the most secure platform in current conditions. This application provides information security as well as the protection of cryptocurrencies. The use of cryptocurrencies is increasing. The

most important reason for this is its encrypted feature. Cryptocurrencies are increasing in use as they create a secure area for money transfers. Since tokens are a blockchain-supported application, its use has increased (Hero, 2022).

Businesses investing in metaverse platforms in South Korea have created a virtual bank supported by augmented reality applications. Consumers will be represented by one person in the virtual bank. In this way, all consumers will benefit from the various services offered by the virtual bank. Consumers will also be in contact with employees on the virtual bank platform. Bank of America carries out projects for virtual reality applications across the country. In this context, it will conduct virtual reality training with approximately 4,500 finance employees. Hana Bank, operating in South Korea, organized trainings through virtual applications. At the end of the trainings, award ceremonies were organized for the successful people (Agirman & Barakali, 2022).

Considering the costs of Metaverse platforms and the size of the investments made in the field, the importance of financial security comes to the fore. The existence of financial investments of this size requires international security measures. Especially businesses and entrepreneurs who follow innovations may enter the metaverse arena from this section. Any application that will enhance the financial security of virtual platforms will be demanded in the international arena.

CONCLUSION

The whole world is moving at an unstoppable speed toward digitalization and beyond that toward virtual realities. In the not-too-distant future, business fields and the activities that compose them will change. Businesses need to take action today to keep up with this transformation. The most critical activity for this is to support the employees with various pieces of training by designing the organizational structures in this direction. Organizations will adapt to change only with their employees. Training to be given to employees; have the potential to develop data analytics, digital literacy, management, and intrapreneurship skills (Weritz, 2022).

The most important companies of the coming periods will be those who achieve digital transformation and implement metaverse platforms. We can understand the signal of this from the investments made by Facebook company in the field. The company intends to stay ahead of the race by designing 8 different augmented reality platforms that support each other.

Metaverse applications will also contribute to the health and education

sectors, which are of great importance for human life, especially in the application phases. It will be possible for all the knowledge gained in theory to become functional by applying and repeating. Augmented reality platforms will change the structures of organizations, their capabilities, and finally all areas of human existence.

The change that will be caused by Metaverse applications is negatively perceived by some authors. According to these authors, augmented reality platforms will cause huge personal privacy problems. Besides, there will be a need to preserve personal data securely (Anderson & Rainie, 2022). Moreover, one of the biggest concerns for the metaverse is that people lose their connection with the real life by immersing themselves in the metaverse world. Studies on this situation support the concerns (Babu & Mohan, 2022).

Despite its negative aspects, the development and spread of metaverse applications has accelerated. It is easier now to think about space travel. What Metaverse platforms can do is no longer a dream. Metaverse is no longer a subject of science fiction. There are several companies that develop their own metaverse designs. Many investors are investing millions of dollars to develop metaverse technology and obtain a share of the new economy (Contreras, et al., 2022).

Investments in virtual reality, augmented reality, and metaverse platforms will continue to increase. Businesses that want to capture the change and development in the world should follow the transnational brands that design their metaverse applications. A few companies, which are especially emphasized in this study, will be mentioned frequently in the future periods.

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MAINTAIN ORGANIZATIONAL CULTURE TO NEW TECHNOLOGIES

Ela OĞAN*

INTRODUCTION

Business and social relations have been conducted in an increasingly virtual life. Virtual organizations, with their virtual employees and virtual customers, carry out their activities in a virtual reality independent of physical reality. Internet, metaverse, internet of things, big data, simulation, augmented reality, cyber-physical systems, and cyber security technologies are indispensable instruments in the functioning of the socio-economic structure.

The digital age concentrates on innovation and the future. It is possible to claim that the future is digital. Although socio-economic structures change along with digital innovations, cultural change seems inevitable. While the need for digitalization is felt in every field, efforts to fulfill the need for digital transformation in the field of management are gaining momentum. Digitalization emerges as the digitization or automation of certain systems and processes within the organization. Digital transformation, however, can be realized with the digital interaction of all elements of the organization, which includes the entire organization. The success of the digital transformation is only possible with the digital culture to be generated. There is a need for a cultural power that believes in digital, and therefore, in the future, can adopt and implement strategies in this regard, and take action with great passion to achieve common goals.

Digitalization brings forth more flexible and agile organizational structures. It is seen that individuals act more flexibly and agile in their business and social lives, as network technology mitigates temporal and

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physical dependence. By the courtesy of the digitization of business processes, activities are being carried out by smart systems. Tasks are performed even faster due to robots, while health and safety problems are eliminated. It can be claimed that digitalization adopts the goals of increasing efficiency by reducing organizational costs by courtesy of speed and agility.

While autonomous systems render production agile, more flexible business models have begun to be adopted. Although the market area has expanded and production has accelerated with the obtained technologies, concentrating on customer-specific needs and expectations requires further focus on innovation. For organizations, the issues of providing enriched experiences to customers, producing virtual products, obtaining information from big data, and managing and sustaining strategies pertinent to having virtual financial resources are emerging as problems. The position of the human factor, which fulfills the job requirements, is subject to change. In the digitalized organizational structure, instead of the employees performing their jobs with physical strength; employees concentrate on innovation, interaction with autonomous processes, thinking, and organizational coordination, in other words, they utilize their mental processes for the fulfillment of organizational strategies. Organizations may turn to technology in order to get digitalized or they may create their technological infrastructure, but they need to provide system-process-technology-human integration to digitalize the organizational structure. This is possible with the cultural change of the organization, that is, with its holistic digital transformation.

DIGITALIZATION AND STRATEGIC DIGITAL TECHNOLOGY TRENDS

Digital technologies have begun to develop along with the utilization of network systems, which are the technical infrastructure of Industry 4.0 (Drath & Horch, 2014). Such a crucial development accompanying globalization has revealed social transformation as a critical strategy along with its new values (Fukuyama, 2018). Digitalization means digitizing and automating business systems and processes. Digitalized systems may function as a decision mechanism through reasoning and evaluation, thanks to logical algorithmic programming (Yoo, 2010). Digitalization refers to the integration of robotic systems such as the Internet of Things, artificial intelligence, big data, etc. Integration with digital is considered an indispensable strategic step for organizations. Organizations reflecting organizational cohesion to the technologies that renew themselves day by day gain a significant

competitive advantage against others. Because digitalization brings forth a flexible organizational structure and reduces the costs of organizational activities (Akdöl, 2022).

Management of businesses in socio-economic processes is transformed into a different dimension through digital technologies. Thanks to hyper-automation systems, performing activities is taken automatically to the next level. It concentrates on creating value with the data obtained as a result of interaction with embedded technologies in cyber-physical systems. Robotic process automation and smart business management applications are among these tools (Gartner, 2022; Karel, 2022). Along with Metaverse's contribution to virtual reality applications, the fact that physical reality can participate in a digital universe simultaneously and with more than one identity also reveals important developments in management processes. At this point, the integration of digital technologies in many systems and processes is involved, and this unity generates a larger cyber universe. The digital technologies employed in managerial processes are briefly mentioned below.

Cyber-Physical Systems

In cyber-physical systems, real and virtual processes are combined through network-based technological infrastructure (Yıldız, 2018). In other words, these systems create interaction in activity processes (Monostori et al., 2016). The pertinent interaction may occur not only in the form of interaction of machines with each other but also in the form of process-human interaction (Banger, 2017). Cyber-physical systems are expressed as systems embedded in machines. In this context, they are systems with the features of recording activities and collecting and interpreting data (Reischauer, 2018). Cyber-physical systems strengthen the organizational structure through the process and human integration.

Virtual Reality, Augmented Reality, and Metaverse

Virtual reality is expressed as interactive applications that provide a three-dimensional experience in the digital environment through certain software and hardware supported by information and communication technologies (Bayraktar & Kaleli, 2007; Şekerçi, 2017). In other words, it can be claimed that virtual reality is the three-dimensional representation of objects in the real world (Farshid et al., 2018).

Augmented reality technologies allow virtual and real-world interaction by including certain virtual content such as sound and images in physical objects (Farshid et al., 2018). In other words, augmented reality refers to technologies that can transfer digital objects in real-time. In the marketing and sales of products, it is possible to provide customers with a real-world experience by courtesy of augmented reality applications. It is applied not only in the industrial field, but also in the promotion and sharing of projects in fields such as architecture, engineering, medicine, and education (Bingöl, 2018; Aydın, 2022).

In virtual reality, while communicating with objects in a completely digital environment; real-time objects are included in digital objects of augmented reality (Tolun, 2022). Augmented reality refers to an advanced version of virtual reality. It can be claimed that virtual and augmented reality are technologies that can complement each other.

Metaverse, literally meaning 'beyond the universe', refers to the creation and control of the real world within a unique digital ecosystem. In virtual reality established in the digital environment, it can offer the opportunity to experience more than one physical reality concurrently, in other words, multiple experiences. It is predicted that Metaverse would become widespread in the coming days as a more effective technology that can combine various processes in social and business life.

Simulation

Simulation is referred to as technologies enabling real-time processes to be reproduced in virtual environments and experienced in physical reality. This system covers virtually-generated situations which have been previously experienced, observed, and thus, controlled (Banger, 2017; Bangsow, 2010). Thus, the consequences of events can be predicted and some adjustments can be made accordingly.

Big Data Analyses and Cloud Computing

Cloud computing includes the technologies that enable the collection of data from various digital fields through cyber-physics systems, the analysis of the obtained data, and the sharing of them upon request (Zhang, et al., 2012; Şen, 2019). Big data analyses provide important contributions to the process by transferring data to the production field. Thus, since innovations

emerge in production, it is possible to conduct activities at lower costs with energy savings and labor employed in the process (Banger, 2017). Obtaining the right information required by big data, interpreting it, and applying it in business processes provide a competitive advantage in terms of achieving strategic goals.

Artificial Intelligence (AI)

Artificial intelligence (AI) is referred to as software technologies that can provide artificially produced systems with mental skills such as perception, attribution, analysis, and decision-making. With artificial intelligence technology, a robot can interact with its surroundings thanks to the ability to use its hands (Schwab, 2017). It is seen that artificial intelligence technologies are becoming widespread in management and other business processes. As a result of its high level of security and its ability to eliminate or solve problems quickly, production costs are reduced (Ramaswamy, 2017; Oracle, 2021).

Internet of Things and Autonomous Robots

The Internet of Things covers technologies that can control systems and processes by communicating between network technologies and physical objects (Vermesan, 2013; Lee & Lee, 2015). This technology now enables various business processes to be managed remotely. Likewise, autonomous robots can interact with their surroundings thanks to the communication established between embedded smart technologies and network technology. With artificial intelligence, autonomous robots acquire the ability to make decisions (Bahrin, et al., 2016; Banger, 2017).

Cyber Security

Cyber security refers to all kinds of digital measures aimed at the protection and maintenance of the existence of individuals, institutions, systems, and processes in digital environments. The fact that technology is developing day by day takes the problem of being safe in the cyber universe to the next level. Today, security measures are not sufficient merely in information technologies, security applications on the Internet and security applications in the digital universe are necessary. Improvements in the field of cyber security should be supported by legal regulations made in the field of informatics.

CHANGE IN ORGANIZATIONAL CULTURE

The term 'culture' refers to all kinds of values that constitute the unity of feelings and thoughts of a community, as well as the instruments that ensure the transfer of these values to the next generations (Oxford, 2023). Individuals are affected by the identities, lifestyles, feelings, and behaviors of the communities to which they belong. After a certain time, this impact constitutes the culture by being shared as common values, norms, beliefs, and behaviors in the identity of the pertinent community (Genç & Karadirek, 2020). The concept of organizational culture, which began to become widespread in the 1970s-1980s, expresses the culture of the community conducting organizational activities (Güçlü, 2003). It is stated that culture exists in organizational DNA and that DNA reflects elements such as identity, climate, and image in organizational culture (Oğan & Cinel, 2021).

It is quite possible for organizational structures to differ while technology is changing, and research studies supported this fact (Woodward, 1965). It is also seen that thoughts, behaviors, and values differ in each field where digital transformation accelerates. Today, with digitalization, common ideas, comprehension, goals, values, and norms that exist in the cultural structure are shared by being supported by digital technologies (Oğan & Wolff, 2022). Change is always there and continues to occur gradually in the cells of social structures. Change is not sudden and easy. Change is a process that takes place over a period. While change emerges with its elements, it reveals the culture by reflecting its outcomes on the behaviors. In other words, digitalized businesses and social processes trigger change and enable the adoption of new behaviors in the culture. Therefore, it can be asserted that digital transformation has a direct impact on culture (Nalbantoğlu, 2021). Upon considering digitalization as a socio-economic need, it is stated that successful digitalization can be achieved through a holistic process that is coherent with the organizational system (Yoo, 2010; Tilson et al., 2010; Coşar, 2022). Improving technology brings forth new business models in the organization, and accordingly, organizational structures are subject to change. It can be claimed that the adopted new organizational processes are the result of adapting to change. In the organizational system and its activities, there is a holistic merger with innovation.

It is seen that innovative approaches are adopted in the management of the business by bringing about changes in the organizational structures of digital technologies and applications. As the momentum of innovation increases,

environmental uncertainties also rise. In order to eliminate uncertainty and clarify the future, the adaptation of organizational structures with digital is extremely crucial. It is expected that today's organizational structures would adapt to flexible, plain, collaborative, innovative, and visionary structures. For instance, it is seen that organizational structures are mostly in the form of matrix structures, they are organized in the form of network networks and they conduct their activities mostly in virtual environments. Besides, as a result of the improving technological applications; it prefers digital business models such as sharing economy (Kaçar & Yakin, 2018), canvas business model (Osterwalder & Pigneur, 2010), smart business partnerships, smart product business models, and smart service (Klein, 2020).

Being able to implement digital business systems and processes is not a situation that can be achieved by merely attaining technology (Rogers, 2016). Merging with new technologies and working in cohesion seems possible only with organizational culture. Therefore, all elements associated with the organization should involve in real partnership upon realizing the determined goals. Firstly, there is a need for well-defined leaders and followers who can partner with them. Therefore, it is thought that interaction exists with digital technologies, and a unique culture in which agile, flexible, collaborative, and innovative thinking is accepted as a common value should be established.

MAINTAINING ORGANIZATIONAL CULTURE WITH NEW TECHNOLOGIES

Change is essential for sustaining organizational life; whereas adaptation is necessary for the change. For adapting technology to the entire organization, a digital-based cultural identity is needed. It is mentioned that there are some important reasons for adopting organizational digital culture. It is seen that organizations that adopt the digital transformation culture have achieved great breakthroughs and strong economic performances. Employees become stronger in structures that can transform digitalization into a common value. Organizations are performing faster activities by courtesy of their digitalized business and processes (BCG, 2023). Because structures that adopt digitalization have the freedom of inquiry and decision. Leading digitalization is extremely crucial and interest in digital capabilities is quite high (Hemerling et al., 2018). Cultural change cannot be easily revealed. It does not seem immediately possible to suddenly break away from conventional cultural comprehension and adopt the comprehension of digital culture. Digital culture develops and matures within the framework

of a process, based on the changing comprehension, structure, strategy, technology, and human resources elements in the digital transformation process.

Leadership and Strategy

The aim of digitalization is to generate more qualified businesses at a lower cost. Improving technology and changing conditions indicate that the future is in digitalization. Although the foundations of digitalization have been laid with Industry 4.0 revolution, it is clear that the transformation has been accelerating in recent years. Social transformation is inevitable and it is required for the realization of transformation in each field. Today, organizations have already taken action to transform by adopting this idea. In order to integrate organizational culture with digital technologies, leaders who believe in the need for digital transformation are needed first. Afterward, it is necessary to determine the organizational strategies for the aim of digitalization. It is extremely critical that the strategies should be predictable and applicable. In order to digitalize the activities of the organization, it is undoubtedly necessary to attain a technological infrastructure. In this context, organizational leaders are expected to implement digital strategies integrated with technological infrastructure.

Digital technologies may have revealed artificial intelligence technologies, nonetheless, organizational intelligence also varies depending on these developments. In this sense, it is possible to claim that organizational intelligence develops with all kinds of products, thoughts, and behaviors that emerge along with the dimensions of technology, leader, employee, business, and process. In the organization, while operations are conducted autonomously by using artificial intelligence (AI), it is human intelligence that generates AI and utilizes it for the purpose, that is, authentic intelligence (Cremer & Kasparov, 2021). In digital culture, augmented intelligence, as the combination of artificial intelligence and authentic intelligence, is emerging. Cultural comprehension with augmented intelligence should be adopted upon determining and implementing strategies in the organization.

It is known that concepts such as innovation, creativity, change, and continuous learning are supported in the leadership approach that adopts the organizational structure integrated with digital technologies. It is stated that such organizational features occur in the flexible organizational structure (Aydın & Bekmezci, 2020). At the same time, digitalized organizational

structures and processes also support flexibility. Thanks to cyber-spatial environments that tend to fall short of physical reality, it is easy and fast to conduct the planning, organization, coordination, and control activities associated with the organization. In the conduct of business, the creation of working teams, the work environments where the employees are given the opportunity to plan, supervise, and even evaluate themselves should be led. Thus, while motivation increases at work, employee loyalty also increases, and this strengthens the organizational culture. It is also possible for this shared organizational culture to achieve success by concentrating on goals. Achieving cohesion of the organizational structure and capabilities with digital technologies, providing the necessary infrastructure, analyzing the changing environment well, and directing resources effectively can be listed as the duties of leaders.

In order to remain powerful in an increasingly competitive environment, leaders need to make punctual and accurate strategic decisions (Demir & Wolff, 2017). Integration with digital is an essential strategy for organizations. For this reason, leading the digitalized organizational culture, and directing the structure and processes of the organization to technology are extremely critical upon implementing this crucial strategy.

Agile and Flexible Organizational Structure

In parallel with technological improvements, the concept of agility has recently deepened its meaning. In other words, agility emerges as a crucial feature that includes various talents in both social and business identities. Organizational agility is expressed as the ability to adapt to the environment and be impetuous in performing activities (Park et al., 2017). Agility fulfills expectations almost instantly by improving the innovation capability of the organization. Thus, it should also be considered as an element affecting the rise in team productivity at work (Rigby, 2020). Digital technologies and applications support agility in terms of characteristics they acquire such as using time effectively, adapting easily to environmental transformation, concentrating on innovation, and making quick decisions. The use of technology is the primary condition for organizational agility. Organizations need to maintain their competitive advantage by assuming importance to agility in order to easily adapt to changing market conditions. Sustaining an advantage over others in the marketplace depends on inventing innovations that would create value for the customer.

Agile organizational structures are fast and practical, and they manage processes effectively. It can be claimed that the most important factor in being able to do all these is the technological infrastructure it acquires. Acquiring a technological infrastructure also offers organizations the opportunity to become flexible in managing and conducting activities. Flexibility allows the revealing of organizational systems and processes with different business methods. Agile organizations that already have the appropriate technology are also likely to become flexible.

Agile Human Resources

While various activities in the social and economic fields are conducted with intelligent processes, the use of artificial intelligence and robots is becoming increasingly common. Conducting business in an organization with digital technologies raises some concerns or uncertainties regarding the place and location of human labor. There are different opinions about what the future of the workforce would be with robots replacing human labor within the organization. The first of these thoughts is associated with the notion that robots will take away people's jobs and the unemployment rate will soar. The second thought is about the transfer of human physical labor to robots, whereas mental labor looms large. While the use of autonomous systems in increasingly digitalized business processes becomes widespread and the need for the physical power of human resources decreases; agility, security, and savings in the organization increase. In a way, the position and value of human resources in the organization are changing. Today, human resources continue to conduct their business through cognitive processes in an area where their thoughts and experience are more needed. Likewise, organizations are in pursuit of talented individuals who are creative, innovative, open to change, and always willing to learn. The intellectual power that can reveal innovation with its creative ability in the organization is present within the potential of human resources. In digitalizing business processes, human resource capital with digital capabilities is brought forth. In the transformation process, it is likely that the capabilities and assets of the organization would also be transformed. In this regard, human resources should be considered an important capital of the organization with its new position and new professions.

McKinsey emphasized the importance of digital capabilities in the digital age. To acquire digital skills within the organization; it is valuable both in

terms of the technological infrastructure of the organization and the ability of its human resources (Bughin et al., 2019). Agile human resources can be expressed as employees who may easily adapt to changes in the environment with their digital skills, perform their jobs quickly, and make quick decisions. Thanks to digital technologies and digital capabilities, an agile organizational structure also emerges.

Organization-Technology-Human Resource Cohesion

State-of-the-art technologies conduct activities rapidly with the impact of network technologies. As technology is swift, its impact on social processes is quite wide. Sometimes these changes seem to be destructive and require radical transformations (Schwab, 2017). It is argued that organizational transformation can be achieved by providing cultural integrity (Rogers, 2016; Bughin et al., 2019; Oğan & Wolff, 2022). Providing cohesion of organizational capabilities with digital capabilities is an important step in creating a culture. Organizational capabilities can be expressed as the core (basic) area, employees, and other resources of the organization. Digital capabilities that stand out today can be referred to as new technologies, applications, digital business processes, human resource capital that can utilize digital technologies, and collaborations with other stakeholders in compliance with their core skills. Digital capabilities emerge as organizational capabilities become compatible with digitalization. It is possible to claim that the digital capabilities of the organization are generated by technology-human resource adaptation.

In digitalized organizational structures, the focal point remains to be human. Nevertheless, human resources need to improve their digital skills in order to maintain this position (Uçuk, 2022). With the cohesion of technology and organizational processes within the focal point of human resources, the maintenance of organizational culture is also ensured.

CONCLUSION

Network technologies render human interaction possible with state-of-the-art technologies. In this respect, business processes can be managed and controlled in virtual environments. Again, with network technologies, objects can be monitored and unlimited data transfer may be provided. This also facilitates future-oriented decision-making. Digital technologies enhance transparency and traceability in activities through smart business processes. While the volume of big data increases with wearable digital

technologies, solution-oriented processes may progress even at a faster pace. While occupational safety is ensured with autonomous objects, the business can be controlled remotely simultaneously. The use of digital technologies in systems and processes reveals the agile organizational structure. Digitalization provides organizational strategies with different perspectives. First of all, organizations have to think and plan for the future. The more consistent they can be in their predictions, the higher their chance of success. For organizations, being able to solve problems quickly, make quick decisions, and put them into practice quickly tends to occur depending on strategic thinking. Because the most critical strategies of transformation are associated with digitalization.

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COMPANIES ARE ALREADY INVOLVED IN METAVERSE AND THEIR ORGANIZATIONAL PRACTICES

Nisan Nur ÇAKIR TEMEL*

INTRODUCTION

The metaverse is an emerging concept that refers to a virtual world where people can engage each other in real-time, using avatars and other digital representations of themselves. While the metaverse is still in its early stages, several companies are already involved in developing technologies and applications that could enable it. One example of a company that is involved in the metaverse is Facebook, which has rebranded itself as Meta and plans to build the infrastructure for the metaverse. Meta has announced that it will invest \$10 billion in the metaverse over the next several years and has already launched Horizon Workrooms, a virtual reality platform for remote collaboration.

Organizational practices of companies that are involved in the metaverse are likely to focus on virtual collaboration and communication. This could involve developing new tools and technologies for remote work and collaboration, as well as new forms of digital communication and collaboration. Another important aspect of the metaverse is digital identity and organizational culture. Companies may need to develop new ways for workers to create and manage their digital identities. The fact that companies create new working orders in the metaverse world directly affects their success. Therefore, the metaverse organizational culture that companies should create and a successful human resources management that will harmonize this culture with the employees are required. Overall, the metaverse represents an exciting new frontier for companies to explore, and those that are already involved are likely to be at the forefront of the next wave of digital innovation.

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CONCEPTUAL FRAMEWORK

The concept of the Metaverse originated from the combination of the words “meta,” meaning beyond or transcending, and “universe.” It was first coined by Neal Stephenson in his science fiction novel “Snow Crash.” In 1999, Philip Rosedale brought this concept to life with the online game “Second Life”. The game provides a multiplayer ecosystem. The popularity of the Metaverse increased further with the success of the movie “Ready Player One,” which was set in a virtual world called OASIS, where everyone could connect to the virtual world. The Metaverse’s turning point was when Mark Zuckerberg changed the name of Facebook to Meta in 2021 (Türk & Darı, 2022; Ning et al., 2021;).

While the first wave of the Metaverse was characterized by Second Life, it has now become a structure that symbolizes online lives that are no differences from the real lives of Generation Z. Therefore, there is a difference between the Metaverse definitions of the early 2000s and today’s. According to Stephenson’s (1992) definition, the Metaverse involves the interactions of avatars in a 3D world that reflect the real world. Jaynes et al. (2003) defined the Metaverse as an immersive digital environment where time barriers do not exist, and users’ visual senses are utilized. Similarly, Prisko (2009) expressed it as a virtual environment with reality-based immersive interaction. Cameron (2012) takes a slightly more critical perspective, describing it as a utopian and dystopian virtual world where people prefer to live more than the real world. Barry et al. (2015) described the Metaverse as a 3D world where avatars do everything for users, while Yoon et al. (2012) defined it as a virtual environment where anything that can be imagined can be created.

Metaverse is a world where real-life individuals can engage in economic, social, cultural, and political activities by avatars. Avatars, also referred to as digital twins or the digital self of the virtual world, are the second identity of individuals on earth. They are enabling them to represent a social personality with their desired appearance in online environments. Metaverse creates an economic bridge between the real and virtual worlds, which results in a deeper social impact. In other words, real and virtual lives are intertwined in the metaverse world. The components that constitute the metaverse have been described by several authors. Choi and Kim propose that the four key elements of the metaverse are augmented reality, virtual worlds, life logging, and mirror worlds. Rehm et al. (2015) take a more inclusive approach to

the components of the metaverse, referring to it as a tool for facilitating the cyber-physical evolution, encompassing technical, social, legal, economic, and other factors.

In order for the Metaverse to offer services equal to the real world, it needs to interact with the external environment. Ning et al. (2021) listed the features that the Metaverse possesses to provide this service, such as multi-technologies that offer augmented reality, a social system closely related to reality, hyper-spacetime equivalency that transcends time and space limits, accessibility brought by globalization that eliminates geographic boundaries, diversity to meet different demands, equality to preserve interpersonal differences, and human values that protect spiritual and cultural values.

While the Metaverse adventure primarily offers a virtual gaming world, it has expanded its boundaries over time. Today, it includes a financial world with cryptocurrencies, besides to the entertainment world. Similarly, the integration of technologies like NFT into the Metaverse and the pandemic-induced necessity for virtual life to become a part of the real world has greatly expanded the ecosystem's boundaries (Damar, 2021). The areas in which the Metaverse manifests itself are now not only limited to the entertainment sector but also to education, business, tourism, and the art world (Ning et al., 2021). The Metaverse provides opportunities like to take part in online concerts, shopping with avatars, buying online artworks, and participating in meetings.

Similar to Facebook's transformation into the metaverse, companies such as Nike, Microsoft, Google, and Amazon have also invested in the metaverse world, and the South Korean government has begun to regulate metaverse policies and has announced its intention to invest, which is a harbinger of a major transformation (Damar, 2021). Therefore, it is not wrong to say that many private companies and governments will invest in the metaverse in the future and are already starting to generate excitement for new business opportunities. As long as organizations invest in this direction, they will increase their sustainability by gaining a competitive advantage. Undoubtedly, to achieve this change and transformation, organizational transformation must occur, new policies must be followed, and especially the adaptation of organizational culture must be ensured at the maximum level through human resources management. Based on this, the next section discusses the innovations that the metaverse brings to organizations.

Metaverse Shape of Organizational Culture

With the pandemic, the emergence of online activities in almost every field has led to a significant increase in interest in the metaverse (Atabay & Aytekin, 2022). Flexible working ways, such as remote work and hybrid work, have become prevalent in every sector from education to healthcare, necessitating the creation of a new culture for organizations. In these new work styles, the importance of office hours has decreased, and physical work environments have lost its significance, as employees' offices and working hours are connected to the internet at anywhere and anytime. The traditional physical meetings within organizations have been replaced by online meetings on platforms such as Zoom, and the concept of an office has been replaced by hot-desk workstations or remote work. Undoubtedly, such a change is a structure that also affects organizational culture. In this sense, the metaverse is expected to reshape the work-life through digital avatar colleagues, immersive team collaborations, virtualization and acceleration of education and training with new technologies, and finally with economic developments (Purdy, 2022).

Due to the impact of the pandemic, organizations have had to find unique and compatible solutions to continue their activities, and thus, this quest has made hybrid and remote working environments appealing. The metaverse is a technology that eliminates boundaries, thanks to its ability to visualize both verbal and non-verbal clues, enable the avatar's owner to control these clues, and allow avatars to engage each other (Davis et al., 2009). Especially for companies that have fully adapted to the metaverse, it allows employees to create avatars that reflect themselves, giving them the ability to determine many details from hair color to clothing (Bailenson et al., 2005; Chavez-Aguayo, 2009). On the other hand, the ability to communicate with anyone who can be online, which is at the heart of the metaverse's emergence, provides the ability for employees within the organization to communicate with many stakeholders internationally without any location or time distinction. Therefore, the avatar profiles created by employees serve as cultural elements reflecting culture, tools containing cultural messages, and assistants enabling interaction (Atabay & Aytekin, 2022).

Moreover, the adoption of online working conditions has made it necessary for employees to participate in work meetings and daily activities through video conferencing. However, some employees feel uncomfortable in front of the camera, which has become an obstacle to their participation.

Therefore, companies have used the metaverse platform to allow employees to participate more freely by creating their own avatars. Similarly, in online meetings or training sessions, traditional presentation techniques have a short-lived effect on employee concentration, which can be addressed by increasing productivity in the workplace by using the metaverse world in a three-dimensional and more realistic atmosphere (Purdy, 2022).

In the recruitment process, using online platforms, the metaverse provides the opportunity to reduce physical ease and costs and also allows for more accurate evaluation of candidates, ensuring the right person is placed in the right job (Pai, 2022). Candidates have the opportunity to evaluate their potential employers through video interviews in the metaverse environment while playing golf. This makes job interviews more appealing. Especially for new candidates, metaverse offers opportunities for orientation, learning about organizational culture, and easy adaptation processes. Instead of static written information in PDF files, employees can interactively navigate through the organization in online environments, and meet managers and team members. For example, Hyundai organized a two-hour online company tour using the YouTube Live platform for its new employees (Pai, 2022).

Not only the appearance of avatars created by employees but also the virtual workspaces created in the metaverse world are part of the organizational culture and identity (Güçlü, 2003). In a non-virtual work environment, many details and even access to organizational managers and colleagues are only possible through online platforms (Purdy, 2022). This increases interaction between units within the same organization the transfer and sharing of culture among all units. The possible results of metaverse in the workplace are expected to have broad effects on human behavior, strengthen communication with consumers, create new opportunities, and increase the importance of behavioral economics (Bianzino, 2022).

Along with the advantages and opportunities that such a vast system brings, some concerns are perceived as threats. Especially, the increased time individuals spend in the virtual world, their detachment from the real world, and the resulting changes in social order; privacy concerns, and the inadequacy of financial control mechanisms in protecting virtual data may cause problems (Büyükbaykal, Sönmezer, 2022). Similarly, innovative ideas such as virtual marriages, acquiring virtual children members, virtual assassinations, insurance-friendly virtual disaster/robbery software, virtual law, psychology, astrology, and economic consulting services have begun

to emerge (Anil & Alankuş; 2022). On the other hand, avatars are seen as disembodied people in the metaverse world, and criticism is made that individuality in this world is fake (Hepp, 2014). It is argued that the identity and sense of belonging resulting from the lack of physical presence need to be addressed.

The metaverse can initiate a technological revolution that can take people to places they never thought possible and fundamentally change people's social lives, lifestyles, learning methods, and work styles for organizations (George et al., 2021). Companies that do not want to fall behind these innovations need to adapt to the changes brought by the metaverse in many areas such as recruitment processes, career planning, performance evaluation, and education processes, and therefore adapt to a new organizational culture. In summary, the metaverse creates and is expected to create changes and transformations in almost every area of working life, from working with colleagues, teamwork, customer relations, and internal dialog to education, performance evaluation, career planning, and physical working conditions. Therefore, in order to minimize the possible threats of the metaverse, turn the perceptions towards the organization into positive, increase productivity, and thus provide a more humane working environment for employees and ensure the continuity of the business, it is necessary to create a metaverse organizational culture brought by digital working life. Since the creation of this culture and the adaptation to the metaverse process by taking the necessary policies are the responsibility of human resources management, the next section discusses the metaverse and HR.

HR PRACTICES IN METAVERSE

The potential use of the metaverse in human resources management is undoubtedly significant. The use of the metaverse is increasing in the areas of recruitment, onboarding, training and development, performance management, and motivation and organizational commitment functions. However, it is known that the use of the metaverse in human resources management may create some disadvantages along with its advantages. Employees need to have a high-quality infrastructure to create avatars and apply their daily routine activities with a more unique method in online platforms. Although it turns the concept of the online work office into a mobile form, the inefficiency of the internet can adversely affect productivity and quality in areas where the internet is insufficient. On the other hand, it is

possible to say that metaverse primarily appeals to Generation Z, and there may be difficulty in adapting to new technological developments during the generation gap. Another concern is cybersecurity. Data privacy is now a primary priority for both companies and employees and is seen as a risk factor. In addition, it is the responsibility of HR management to monitor and control to protect employees from harassment in the virtual world (Meglio, 2022).

The entry of the metaverse into working life places great responsibility and duty on HR. Forbes has outlined three key principles in the roadmap that HR management should follow to create a successful metaverse application that has a positive impact on organizations. Firstly, HR management needs to follow the necessary practices to ensure fairness in the metaverse working environment. The most important steps to achieve this equality are to equalize the technology hierarchy among young and old employees, expand internet bandwidth for each employee, and take control and preventative measures against harassment and bullying. The second principle offers a productive and collaborative work environment. The easiest way to achieve this is to design virtual working environments that will evoke a positive organizational feeling and are in harmony with the real world. If the physical work environment is designed to facilitate employee participation and to make them feel equal to their leaders, a productive and collaborative spirit can be achieved. Using the metaverse for virtual recruitment, training, and orientation processes is stated as the third principle, which is the responsibility of human resources (Vulpen, 2022).

Companies are Already Involved in Metaverse and Their Organizational Practices

Companies that are involved in the metaverse are at the forefront of the technological revolution, exploring the boundaries of virtual reality and creating immersive experiences for users. These companies understand the potential of the metaverse to transform the way we work, play, and engage each other and are investing heavily in the development of the technology. Whether they are creating metaverse platforms, developing virtual reality hardware, or producing content for the metaverse, these companies share a commitment to innovation, collaboration, and creating engaging experiences for users. As the metaverse continues to evolve and expand, these companies will play a critical role in shaping its future and unlocking its full potential.

Facebook- Meta

“We are going to be the most forward-leaning company on remote work at our scale, and we’re going to do this over time in a way that is measured, thoughtful and responsible.”

Mark Zuckerberg

Founded by Mark Zuckerberg in 2004 and expanded in 2006, Facebook made a rapid and ambitious entry into the metaverse world by changing its company name to “Meta” in 2021. With an annual revenue of \$117.9 billion and a profit of \$39.4 billion in 2022, Meta employs 71,970 people (Forbes, 2022). The company’s mission is to create a social community for people and bring the world together, and Meta’s products aim to empower more than 3 billion people worldwide to share and develop their ideas (Meta, 2023). To achieve this goal, it is fair to say that Meta offers a work environment that values differences and emphasizes the importance of the individual. In order to meet the demand, the company follows policies in line with a culture where differences can be managed and there is a sense of equality between individuals within its own teams.

Among the company’s latest developments are the Cambria, Nazaré, and Horizon virtual world/meeting space projects, as well as the Meta gaze, body, and face tracking VR headset with high resolution. The company’s latest project, the Meta Quest Pro, was recently introduced as a VR headset where the real and virtual worlds are seamlessly integrated, and the level of reality is expanded. This latest model of the headset is designed to increase productivity in the workplace and has made a significant impact in the business world. Microsoft’s President and CEO Satya Nadella joined Mark Zuckerberg to announce a new partnership that will bring new working and productivity tools for Microsoft Windows 365 and Microsoft Teams to Meta Quest Pro and Meta Quest 2 (Meta, 2023).

The organizational culture embraced by the company is one where, regardless of where you work, there are great teams that overcome challenges. Meta, which considers everyone to be like themselves, creates meaningful job and fosters a flexible and diversity-focused atmosphere that embraces everyone who works there. The steps taken to realize this intention are based on six core values established by the company: Move Fast, Focus on Long-Term Impact, Build Awesome Things, Live in the Future, Be Direct, and Respect Your Colleagues, Meta, Metamates, Me (Meta, 2023).

Moreover, it would not be wrong to say that diversity is the most important aspect of Meta's values. Since 2014, the company has been defining its diversity policies through annual reports, and since 2019, it has doubled the number of women and Hispanic employees. Meta employs 75% of its employees in various locations without geographic boundaries, diversifying its approach to traditional working hours. To make diversity fully inclusive, Meta Avatars offer more than a billion different feature combinations, including hearing aids, wheelchairs, and other assistive devices. Similarly, in view of the difficulties with accessing VR devices, the company is also focusing on delivering virtual reality through smartphones (Meta, 2023).

Meta has also adopted flexible work styles that come with the metaverse world and digital working life, which allow employees to have a more flexible work environment. Meta adopts a collaboration model where employees can work remotely, have hybrid work models, and set their own working hours. It is possible to say that there is a culture of extensive and flexible employee benefits at Meta. Meta offers packages that include health, dental, and vision insurance for employees and their families, reimbursing family care expenses to increase physical, mental, and financial well-being. These packages also cover autism and cancer care, as well as programs that assist transgender services. Additionally, Meta offers paid leave for new parents, adoption expenses, flexible accounts for childcare expenses, and personalized assistance packages for family care. Competitive retirement plans, life insurance, counseling, and legal support are also provided (Meta, 2023).

The company Meta Horizon, which represents the future of work, implements this by providing virtual workspaces. It has been expressed that virtual meetings, brainstorming sessions, and team collaborations increase productivity and efficiency for the company. They have stated that they operate on 5 fundamental principles to successfully realize this new way of working (Meta, 2023).

1- Use of VR and AR in Meetings

The company, considering the scientific fact that individuals exposed to online work constantly may experience negative effects such as exhaustion, high fatigue, and less use of body language due to being away from social environments in the long term, is arranging its working environment. In this sense, VR headset increase the connection with the real world, allowing employees to participate in virtual meetings and chat with colleagues and managers just like in real meetings.

2- Infinity Offices

The philosophy of infinite offices, which takes remote working to a different dimension, provides a work environment at any time and anywhere with VR headset, offering unlimited flexibility and work standards.

3- Orientation and Training with VR and AR

The company states that learning by doing, not just listening, is the best way to learn so VR headset will provide a complete experience in the process of getting to know the company and learning the job for newcomers.

4- Arranging Traditional Work Environment with VR

By using VR headset and metaverse platforms to enhance digital elements in meetings, training, or just individual work, it is possible to completely eliminate physical work boundaries and make them more engaging.

5- Revolutionizing Organizational Culture

The goal is to create an organizational culture where everyone is equal, even in hierarchical or dispersed organizations, and barriers between leaders and employees are removed.

Nvidia

The company founded in 1993 by Jensen Huang, Chris Malachowsky, and Curtis Priemi with the aim of developing 3D graphics, now plays an important role in the industry with its Omniverse platform for creating the metaverse. With over 10,000 employees, the company had nearly \$10 billion in revenue in 2022 (Glassdoor.com, 2022).

Thanks to the Omniverse, it is possible to have a working environment where dreams can come true, where ideas and innovations that go beyond limits meet reality. With its artificial intelligence that can smoothly run individual and team workflows, Omniverse also provides opportunities to develop different talents. Nvidia, which is ranked as the 5th most successful company in the Great Place to Work in 2022, has repeated this success for 5 consecutive years and has been awarded as the best employer of 2022 in the Glassdoor ranking. Ninety percent of employees have indicated that Nvidia is the best place to work (Fortune, 2023; Glassdoor.com, 2023).

Nvidia emphasizes that it has come to the forefront of the metaverse field by making the biggest transformations, overcoming challenges with a fearless and innovative work culture, and utilizing the opportunities brought by diversity. With their project called Earth 2, Nvidia works on creating a

twin of the world to predict potential disasters that may be caused by global climate change. They also conduct research in various disciplines, from astrophysics and genomics to climate science and new energy discovery (Nvidia.com, 2023).

The company states that its' work culture is never created within the framework of norms and rules; instead, they create methods with love and compassion to provide what is best for its' employees and their families. Nvidia supports employee rights by providing comfort, belonging, and financial and moral assistance programs for them and their families throughout their lives. It is possible to say that the ancillary benefits provided to employees are also quite comprehensive. These include health packages that cover not only employees but also their families, policies that encourage flexible working and are quite generous in terms of holidays, and the provision of financial support funding, to name a few. And diversity, which is a must-have in the metaverse world, is another topic that Nvidia values in its organizational culture. The company emphasizes that everyone has a voice in creating innovations and overcoming challenges together, and that diversity creates endless opportunities for the company (Nvidia.com, 2023).

Microsoft

Microsoft, founded by Bill Gates in 1975, is the world's largest software company with \$204 billion in revenue and 221,000 employees as of 2022. In 2022, the company introduced Mesh for Microsoft Teams to bring the metaverse world to life, creating a more collaborative and immersive model where business meetings can be held, documents can be shared, and employees can gather in virtual environments. Microsoft sees the use of metaverse platforms as an effective solution that goes beyond formality and promotes teamwork. With Mesh, the company claims that daily routine tasks become more enjoyable and engaging (Microsoft, 2023).

Microsoft emphasizes that the key to enabling its employees to do their best work is to create the best environment for them. They believe that by doing so, they will have the opportunity to accomplish their missions. Microsoft values diversity and believes that privileges and differences are essential to success. In this sense, the company highly values any suggestions or criticisms offered by its employees to strengthen Microsoft. The company offers various benefits to its employees, including health spending accounts, flexible spending accounts, health support, retirement plans and funds, the

opportunity to become a Microsoft shareholder, career development support, holiday and leisure opportunities, and work-life balance. The company adopts hybrid work models, providing opportunities for remote and telecommuting, as well as working from multiple locations without geographic restrictions. Additionally, the company allows employees to schedule their work and vacation time according to their own preferences (Microsoft, 2023).

CONCLUSION

The Metaverse has brought virtual worlds into the working world and has started to create major changes in the future of work. With the announcement of Facebook changing its name to Meta, the increased interest in the Metaverse in the business world has begun to affect many sectors. It is possible to say that in the future of work, traditional meetings, office environments, and work colleagues will be replaced by organizations equipped with a different culture in a virtual world.

Through their digital twins, employees can attend meetings and chat with avatar managers and colleagues. Companies that bring the Metaverse world to their organizations state that these new working conditions make their employees more dynamic, active, productive, social, and motivated, thereby facilitating the achievement of the company's goals. The unlimited combination of working environments that the Metaverse offers makes it possible to make routine and boring tasks more compelling. Moreover it is possible to create brainstorming sessions to generate new and extraordinary ideas, providing great opportunities for companies. In order to compete in the sector, it seems inevitable for companies to adapt to these technologies. However, companies that want to adapt these technologies to their organizations should not forget some disadvantages. It is important that companies that create a new way of working with the Metaverse do not ignore the new arrangements that will occur in their organizational culture and that the new organizational culture created is supported by human resources management. Through the Metaverse, it is possible to say that the functions of human resources management, such as recruitment, orientation and training, will be used much more effectively. In terms of HR, the areas where the Metaverse is used can be listed as virtual recruiting and onboarding, remote work and flexible schedules, virtual training and development, virtual team building and collaboration, and virtual performance management. However, for these innovations to be managed, organizations need to adapt to some cultural changes.

In this sense, this paper examines Facebook, the pioneer in the Metaverse industry, Nvidia, which has been ranked as the best place to work for five consecutive years, and Microsoft, the world's largest software producer, in terms of their organizational culture and human resources management in adapting the Metaverse world to their work environments. When these three companies' adaptation of the Metaverse world to their work environments is examined, it is observed that there are some common points of the six basic principles of the Metaverse in working life.

1. Collaboration and teamwork
2. Creativity and innovation
3. Flexibility and adaptability
4. Inclusion and diversity
5. Learning and development
6. Trust and transparency

Overall, the metaverse presents many opportunities for companies to enhance their HR practices and improve the employee experience. However, companies will need to carefully consider the potential challenges associated with virtual work and ensure that employees are adequately supported in this new environment and create new principles in terms of organizational culture.

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METAVVERSE AND INTERNAL MARKETING IN BUSINESS LIFE

Dilek AYDOĞDU*

INTRODUCTION

Today, physical reality and virtual reality are in the phase of integration with each other. Moving the physical world to virtual platforms has begun to change individual habits and daily routines. Professional business life is also affected by this change and digital transformation. The inclusion of technology in various sectors brings along new needs and this situation also affects employees. The current business world has encountered virtual reality. Meetings, daily routines, office environments, and motivation of employees are tried to be carried out through the 'Metaverse' and the usual corporate structure is changing form. While institutions change their form in this transformation process, they have to be partners in the change in their internal employees. The virtualization of the physical world and the transfer of the corporate structure to the virtual universe have caused changes in internal communication, motivation, and functioning. The main purpose of internal marketing; It is aimed at ensuring employee motivation in the execution of in-house activities and increasing the employee's commitment to the corporate structure. With internal marketing activities, qualified employees can be included, motivated and internal continuity can be ensured. Employees in the Internal Marketing (IM) process are potential customers for the organization. With internal marketing activities, qualified employees can be included, motivated and internal continuity can be ensured. Employees in the Internal Marketing process are potential customers for the organization. The virtualization of the intra-organizational structure and functioning can put pressure on the employee profile engaged in physical activity and cause them to feel inadequate. The concept of overtime, which exists in the physical

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business world, can continue 24/7 in the virtual universe. Professional work environments, corporate structures, and employees are also constantly involved in this process. Continuing the internal communication and workflow 24/7 over certain applications and virtual platforms can increase the workload of the employees and affect their commitment to the corporate structure. Within the scope of this study, it is aimed to evaluate the virtual universe in the business world on behalf of internal marketing activities and to shed light on the future corporate process.

METAVERSE OVERVIEW

The first appearance of the word 'metaverse' started when the state of transcending the physical world (meta) and the universe (universe) were combined in a virtual environment and described in a single word. The word 'Metaverse' was first coined in Neal Stephenson's 'Snow Crash', published in 1992, which caused various speculations (Joshua, 2017). In the work, the concept of metaverse and its environment are defined as the transport of the physical world into a virtual parallel universe, which includes virtual reality and exists with digital avatars. In this universe, life is long, life is unlimited in every environment where the internet exists, and it is a reflection of the physical world in the parallel universe (Stentoft & Bruun, 2019). Each user included in the metaverse environment has an avatar of their own, and these avatars are metaphors for the physical world of individuals reflected in the virtual environment (Lee, et al., 2021). If the metaverse is a duality, there are three basic stages of existence in this duality. These stages are; digital twins, digital natives, and virtual reality. Digital twins consist of the reflections of objects in virtual reality where physical features and functions are similar and close to each other (Grieves & Vickers, 2017). Computer-aided drawings and product designs, smart city planning and artificial intelligence-supported robotic systems and applications are shown as examples (Bauer, Antonino & Kuhn, 2019). Digital natives, on the other hand, consist of the introduction of avatars representing individuals after the physical world is reflected in the virtual environment. By connecting with various creations of the digital world through avatars, a new ecosystem, new rules, regulations, and laws emerge in the metaverse. Avatars represent ownership in the metaverse and are seen as symbols of digital creation (Bush, 2021). Due to its structure, the metaverse contains norms and orders that support the physical world materially and spiritually (Viljoen, 2020). As a final stage, the system existing in virtual reality

has the ability to sustain itself. Avatars, digital twins, and the virtualization of the physical world come together in the metaverse ecosystem. To exist in the virtual world is the metaverse itself. Multiple simultaneous users can join the system, be characterized by their avatars, live, have many experiences in the multi-world, and be represented. This situation is also considered as the meeting and execution of many heterogeneous activities simultaneously (Grieves & Vickers, 2017).

With Metaverse, after the data network storage in the physical world is transferred to the virtual environment, it is expanded to create a metadata store that can have unlimited access. The real-life selves of individuals who are included in this environment with their avatars are identified with virtual reality in the metadata warehouse and their limited dimensions are enlarged (Lee, et al., 2021). Metaverse reality is rapidly penetrating our lives through applications and various platforms used in daily life (Kye, et al., 2021). With the introduction of virtual environments, digital and smart objects (IoT), virtual reality (VR), and augmented reality (AR) concepts into the lives of individuals, multi-user environments have been created and it has become possible for individuals to interact with technology-based multiple senses on virtual platforms. Metaverse users can stay in uninterrupted connection with each other over networks in these environments. In this process, digital artificial intelligence is active. The term 'meta', which represents the concept of metaverse, is an indication that the virtual environment is in a gigantic form. Giant playgrounds, multi-experienced and projected environments with AR, connecting the world simultaneously over a giant network, making VR technology immersive and indispensable for users, and many more are promised as a contemporary initiative. In this process, the Web 2.0 form also changes and develops with Metaverse, and it is aimed to improve its level and limits by making it compatible with virtual reality (Ball, 2020). Metaverse has its own rules and functioning. Virtual forms are created as an alternative to the systems existing in the physical world, and a similar simulation of the real world in VR with social networks is offered to the users. Individuals will be able to travel in these environments, make payments via cryptocurrencies, continue their social lives, and all systems will be brought together in a single ecosystem. The metadata warehouse is a transformative model that aims to virtualize a multitude of platforms and processes. Included in this model and process are business environments, government structures, and social structures together with global and economic dynamics. For each of them, this process is a brand-new formation and transformation (Pınarbaşı,

2022). Metaverse can be considered a futuristic field of experience. With virtual reality, property acquisition, and ownership opportunities are offered to individuals in a parallel universe to the physical world. Simulations of the virtual environment are opened to experience through VR glasses and avatars. Meta-society, meta-enterprise, meta-management, meta-cities, and many other dynamics are preparing and changing for commodification (Wang, et al., 2022). It is promised that a more free and timeless world will be offered to individuals. The title, which is getting popular day by day, is shaped by the perception of 'reality'. It is frequently emphasized that the real world will be metaverse and that an order is established on equality, opportunities, justice, and freedom (Lopez-Ojeda, 2022).

When we look at the promised elements, smart objects (IoT) were introduced with the addition of the phrase 'smart' to the beginning of each object, which entered our lives with Industry 4.0, and digital transformation was initiated by transferring the concept of reality to the 'virtual' platform. The virtual state of reality, the virtual state of the physical world, the virtual state of the employees, the virtual state of the language, the virtual state of communication, the virtual state of the five senses, and many other elements in a mega-environment contain an irregularity that has not yet been noticed. How valid is the perception of freedom, equality, and reality that will be presented to individuals in the metaverse environment? In an alternative universe to the virtual and physical world, which is predicted to be unlimited, it is open to debate how well individuals, institutions, and business forms that have physical limitations will be ready for this transformation. Where there is limitlessness, there is normlessness and chaos. In order to achieve order, it may be necessary to remove the limitlessness. Simultaneously addressing the five senses and providing healthy control may not be possible in simulations that will involve individuals and institutions on virtual platforms. The confusion and uncontrollability that will be created by the differences between what will be implemented and what is promised in the metaverse may lead to the questioning of the world where the borders have been removed and the ties between the real world order and operation to be broken.

Limits and Risks of Metaverse

Recently, the perception that individuals who are included in the Metaverse environment will live in a freer world has begun to spread rapidly. In some studies, it is argued that experiences that appeal to the senses in

the virtual environment can have a more effective power on individuals and their daily lives. It is suggested that empathy can be developed in individuals and relationships with virtual tools, and it is aimed to disseminate this idea (Hu & Lai, 2022). To argue that the inequality, inadequacy, or dissatisfaction processes that exist in daily life can be resolved through a single platform or tool ignores the historical and structural process on which the existing real order is based. Accordingly, the negative effects that may arise with virtual reality and Metaverse are overlooked (Franks, 2017). Digital environments carry risks that will pave the way for the physical barriers existing in the real world to increase (Helsper, 2021). When we look at the world in general, it is seen that the rate of 'digital literacy' is not widespread enough. It is unlikely that the technological steps taken regarding the Metaverse will be inclusive for everyone in the near future. In the future, its formation in a way that will cover everyone may cause new problems to arise. Therefore, the concept of Metaverse and its boundaries are open to question (Erken, 2022).

In the last two decades, digital developments have accelerated and the accessibility of VR technologies has increased, but the cost of augmented and extended reality (AR-XR) technologies and the adequacy of use have not yet been widespread among the general population. Industrial firms and certain research and development centers are among the first to attempt to use VR technology. It has not been possible for large masses to buy these costly technologies. Today, VR technology is limited and accessible to a small number of consumers and is used by businesses. The current level of VR technology has been compared to the period when smartphones were first introduced in 2008. In the first period, the adoption and use of smartphones by the general mass were limited (Georgiadou, 2021). Today, at the point reached by the rapid progress of technology, many experiences with the perception of 'reality' are tried to be presented to users under the roof of Metaverse through simulations. Many technological initiatives put forward are marketed for the perception of reality. In this process, VR, AR, mixed reality (MR) and XR technologies seen in the market are still in their infancy. Blockchain is seen as an alternative extension to the Metaverse, where all of them are tried to be gathered together for a single decentralized Web 3.0 and beyond (Erken, 2022). As a concept, we are trying to present the ideas of futuristic shopping in an online environment, carrying out economic activities on the blockchain, socializing in virtual reality, and living independently of time in a different universe (Mystakidis, 2022). The fact that the Metaverse will replace the existing world requires it to act in a way that includes everyone.

Building a new order from scratch in a new environment is possible with a holistic approach and the principle of equality. It is necessary to think in detail about the metaverse and the near future and to find solutions in advance for the difficulties that may arise (Lee, et al., 2021). The inequality, injustice, ability to function and disorder that exist in the real world tend to spread in all environments unless they are radically resolved. Development of digital skills, problem-solving, and collaborations in the virtual environment are among the expectations of today's century (Golding & Murdock, 2001). However, the digital transformation process does not only consist of technological skills. It is also necessary for the entire audience to access the Internet and technology simultaneously under the same conditions. In addition to internet access, it should be taken into account that digital literacy and technological skills are at different levels for individuals.

The concept of technology brings with it alienation. It is known that technological dynamics have sociological effects on social structures in technical and intermediary roles. Technology can be considered as the support of knowledge and skills with machines in production, interaction, and operational processes for a certain purpose. It can be used as a means of communication in the social dimension. It can play a role in how and in what direction individuals can act in line with their wishes and needs. Basically, the development process has been aimed at meeting human needs and expectations. There are intellectual needs and expectations beyond the basic needs of individuals such as eating, drinking, and sheltering. At this point, technological processes for meeting subjective and objective needs have come into play. The capitalist order makes attempts to produce more and for more than the existing needs. In this process, technology has become one of the basic elements that feed capitalism and give it flexibility. The concept of need has gone beyond the basic need, and has turned into the habit of wanting more than the need that does not exist in human nature but is created artificially. This transformation has been realized with technological objects and initiatives. The development of technology in this direction is contrary to human nature and will increase alienation in the social structure. As technology develops, individuals have started to become alienated by moving away from each other and the structure they belong to (Yıldız & Bozkurt, 2023). In the alienation process, labor, and capital began to be managed through machines, labor and corporate processes had to be automated and devalued. At the end of the day, dissatisfaction and indifference emerge in individuals and work environments with technological developments (Adibifar, 2016).

Metaverse is the most up-to-date innovation in our lives in the light of technology. Every innovation brings challenges. Man is a physical being, has physical needs, and lives in a physical world. Today, while 100% harmonization of humans and machine in all social structures has not been completed yet and does not seem possible; Confronting the concept of the metaverse is quite challenging. Presenting a virtual world as a reality to individuals and the business world causes minds to be blurred. The definition of virtual reality forms as an alternative universe and the promise of freedom has not yet been clarified.

Accessibility of Metaverse in Business Life

In some studies, it is predicted that individuals with high financial power and wealth have easier access to technological opportunities in the digital transformation process, and it is revealed that their digital literacy levels are higher (Angeline, et al., 2021). Uncertainties should be eliminated and clarified in order to determine who will be able to use the new technological products introduced to the market, who will increase their income level on these platforms and who and what developments will negatively affect them (Franks, 2017). Each new formation creates an effect inside and outside the existing order. A problem that exists in the physical world can also arise in the digital environment. The process of designing and launching virtual reality is very costly. For this reason, certain segments will have difficulty being included in the system and will fall behind (Erken, 2022). The concept of metaverse and involvement in the virtual reality process has become a trending topic of discussion today and is closely related to the business world. These new technologies encompass our homes, our work, our cities, our working environments, and even the universe, and the solar system. With the existence of the Internet, this revolutionary change process was initiated under the umbrella of Metaverse. With Metaverse, a new universe, a new economy, a new culture and socialization environment and new experiences are prioritized. Today, a distanced stance is taken to bring the physical and virtual worlds together, but change is inevitable. In the conceptual framework, the inclusive space of the Metaverse is described as unlimited. However, in light of technological developments, the combination of human and machine elements may cause the two bits of intelligence to collide with each other. The collision of human intelligence and artificial intelligence and the transfer of the real world to the virtual environment paved the way for

the discussion of privacy and ethical issues. New rules and regulations are needed in order to solve the technology-based problems that may arise. At this point, states and institutions should step in. The concept of metaverse should be evaluated from a universal perspective because it is the focus of current discussions in the near future. It is a concept that is on the agenda for individual lives, corporate structures, and the media world. It contains possibilities and threats within itself (Yıldız & Bozkurt, 2023). Systematic preparation should be made on various platforms for the problems that may arise, and solutions should be offered for individuals, institutions, and state structures.

The metaverse world is considered by some researchers to be able to save individuals from the sanctions of the physical world. It is defined as an alternative world where goods or services can be purchased, items such as land, house, and goods can be transferred to the metaverse, and social activities can be offered by making them more enjoyable. It is thought that this world has become active with the pandemic process and worldwide restrictions (Roh, 2021). Founded by John Perry Barlow in 1990, the Electronic Frontier Foundation (EFF) platform; published a statement defending the freedom of individuals to act independently from the sanctions of the state and companies in the internet world. However, over time, these ideas defended by the EFF have been replaced by the commercial purposes of technology companies. The cyber-world utopia that protects the individual within the EFF has been transferred to the spatial dimension via WEB 3.0 today. The existing internet concept is presented to users in a new-generation form. This situation paved the way for popular technology companies to grow by making more profit in cyber utopia. There is a trend that becomes gigantic with the concept of commodity. Certain names and companies have become leading the technology. This situation causes the existing ecosystem to become more difficult to control and open to decentralized access. What form a process that is independent of control will turn into in the near future is one of the current discussion topics (Yıldız & Bozkurt, 2023). It is expected that communication problems will arise in the promised universe, and it is predicted that the level of socialization of individuals with their environment will decrease and loneliness will increase (Kiraz Demir, 2022).

An American entrepreneur and strategist, Matthew Ball (2020) is one of the names that are seen as capable of shaping today's business world by closely following commercial and technological developments. The one-

to-one transfer of the physical world to an unlimited virtual world in live form is defined as an opportunity that allows individuals and companies to create their own experiences. In the metaverse world, it is argued that users and companies can create their own digital autonomy, and it is thought that independent components can work together in an unlimited environment. It is enough to be online once in Metaverse. Individuals will be able to participate in another virtual platform or activity without logging out. However, this eliminates privacy and makes every item included in the metaverse accessible. The concept of metaverse, which promises freedom, can be considered as a way to gain financial gain from this data by allowing personal data to be collected and made accessible on one hand. This process has begun to be implemented with blockchain technology and cryptocurrencies. Due to the nature of the system, active users will be controlled and limited by the system. Environments in which businesses can operate with smart contracts and sanctions are being prepared. It is planned that laws and regulations will come into effect with certain codes. Banks, law firms, businesses operating in various sectors, government structures, and many traditionally managed systems are included in the chain and standardized (Yıldız & Bozkurt, 2023). The advantageous side is that no historical data can be changed or deleted in the blockchain system of the metaverse world. Everything logged into the system and processed will be recorded. This will increase the function of the data stored in the blockchain. It will be possible to store and store unlimited data in an unlimited area at once (Arvas, 2022). A new and alternative world that promises freedom and limitlessness brings with it risks that are difficult to foresee, as it has features that will disable the systems, known facts, and habits from the past to the present. For this reason, the concept of Metaverse is an important element that the business world, employers, and employees should think about and discuss. It cannot be ignored, and the rapid change and transformation of known forms with the new generation technology will take place sooner than anticipated.

MARKETING OVERVIEW

According to the general marketing definition of the American Marketing Association (AMA); Marketing is defined as the whole of activities in which goods, ideas, and services are created, pricing, distribution, and promotion efforts are carried out to change the goals of individuals and organizational structures (AMA, 2017). Perspectives on marketing and marketing activities

take shape towards the processes of change. In this process of change, consumers, their wishes and needs, their voice, stakeholders, and change itself play a role. In the modern process, the way similar perspectives define and direct marketing is on 'change' and 'value creation' in the understanding of business. Both points of focus are related to each other. In this context, when a general evaluation is made, in order to talk about the change in marketing activities;

- Ensuring communication and relationship between the parties
- Having a value of its own on both sides
- The parties should benefit from each other and both sides should be open to change (Zaroğlu, 2015).

In light of economic developments, the marketing perspectives of businesses operating in the global market and the forms of the marketing mix elements they apply have changed. Basically, the focus of the marketing mix is on satisfying and satisfying the consumer needs in the market. The marketing mix focuses on simultaneously satisfying the customer as well as satisfying the need. The commonly known 'Marketing Mix' (4P); is product, price, promotion, and place. Among the new elements added to 4P with today's modern understanding and change; are people and processes. The people and process elements led the marketing mix to leave the traditional form and add new stakeholders to the mix. Physical evidence, principles, promises, and partnerships for providing services to existing stakeholders have been added (Açıklan, 2020). With the development of the 4P's perspective, adding people and processes to the mix paved the way for a change in focus points in marketing activities. It has come to the fore that the activities are not only aimed at a concrete need but also that everything that has a human factor is included in the mix.

Where the service is concerned, everything related to the human factor can be included in the process. Examples of this are customers and customers, as well as personnel within the business. Customers, businesses, and employees constitute an inseparable whole. In marketing activities and marketing mix, these are elements of the triple pillar (Kayabaşı, 2019). Physical evidence, as another element in the marketing mix, is about the process and the promotional activities within the process. Examples of this are store layout, offers offered to consumers in the market, indoor and outdoor environments in the business, lighting, smell, sound, visuality, physical clues, and personnel (Pomeroy, 2017). The element of principles plays a role

in the outward reflection of a business. The principles include the mission of the institution, officially declared reports, public commitments, public relations in the corporate structure, personnel information, and interest and advertising activities (Madeira, 2019). It is possible to summarize the elements of principles in the marketing mix as the reflection of what is inside the organization to the outside. Today, it is very important and necessary for the institution to reflect what is inside outwardly in order to successfully carry out its marketing activities.

What is promised by the institution in the marketing mix is the key point between the consumer and the institution. The main purpose of the organization carrying out a commercial activity is reserved in its promises. The element that determines the structure and direction of the business is its promises. Promises made by the business play a role in measuring the performance of the organization and realizing the plans for the future (Kotler, 2003). Partnership, the last element of the mix, includes collaborations with internal and external stakeholders. Internal partnerships, internal marketing activities, and human resources management play an important role in ensuring sustainability and continuity within the business. In the partnership process, the establishment of systems for training, guiding, and rewarding the employees of the institution is at the forefront (Açıklalın, 2020). The fact that the internal world of the institution is in balance and managed correctly is the reason for its successful reflection on the outside. Internal dynamics play an important role in shaping the activities carried out outside the institution. Employees are one of the most basic elements that reflect the identity and purpose of an institution to the market. Employee performance is very effective in achieving the goals of the organization and maintaining its existence. Internal marketing activities that concern the institution and its employees in learning organizational structures attract a lot of attention today. Along with the corporate structure, employees are included in the change process. All of them are a part of the change and it is possible to ensure continuity by acting together.

Internal Marketing

One of the concepts, which has been discussed for a long time in theory and been on the agenda in every period, is Internal Marketing (IM), but today the concept is insufficient in the field of application. Although IM continues to be researched and discussed, it is very limited in number

when it is implemented in the business world and on various organizational structures (Brooks, Lings & Botschen, 1999). What are internal marketing and internal marketing activities? It is defined as attracting a qualified workforce into the organization and making this workforce permanent in the organizational structure as an answer to the question. Motivating employees and improving their commitment to the organization are among the activities of IM. Employees within the organization are viewed as 'Customers' from the IP window (Rafiq & Pervaiz, 1993). If each employee is a customer of the organization, the main purpose can be defined to retain and win these customers. In some studies, the concept of IM can directly affect the internal structure of an organization and its perspective on sales and marketing activities. The more customer and sales-oriented the employee of the institution is in the organization, the more effective it is evaluated on behalf of marketing activities. Market and customer-oriented motivation of an employee depends on the IM process. Whatever the internal approach within the institution is, this approach is reflected in the activities carried out outside the institution in a similar way. The IM process can be considered as bringing together two separate parts. One of the parts is 'attitude management' within the organization and the other is 'communication management' (Sterchic, 2001). Everyone in the organization has their own customer portfolio, and the employees are considered internal customers of the institution with these customer portfolios they have. With IM, it is possible to provide services to the end customer outside the institution thanks to the internal customers within the institution (Wisner & Stanley, 1999). Some studies have examined the concept of IM in the context of interactive marketing. Interactive marketing focuses on the communication between the corporate employee and the external customer. At the stage of providing service, employees gain customers to the organization by communicating with the external customer in a masterful and effective manner (Mucuk, 2001). Interactive marketing, unlike the IM process, focuses on the communication process and communication management of employees with customers. In IM activities, on the other hand, it is possible to keep employees, who are seen as internal customers, connected to the organization together with external customers.

When we look at the concept and process of IM in general over time, it is possible to define it as having customer-oriented employees and motivating them in this direction. It is important that people working in different departments within the company are motivated and coordinated at the same level. Bringing each employee together and creating a meaningful whole

is a priority for IM applications. In the motivation process, it is important to break the negative resistance of the employees towards the institution and the activities carried out. In the IM process; The employee should be motivated and should be enabled to act in the direction of the customer. There should be communication and integrity between each department. Marketing-based approaches should be adopted within certain companies and departments (Rafiq & Pervaiz, 2000). Considering various studies and definitions, the concept and process of IM is related to many fields. At the beginning of these, it is a priority to act in the direction of the market inside and outside the institution, to reflect the corporate culture to the services offered, and to attach importance to Total Quality Management (TQM) and Human Resources Management (HRM). At this point, the difference between the IM process and TQM is that while TQM deals with the demands of the employees for production activities, IM focuses on the harmony and relationship between the organization and the employee (Ay & Kartal, 2003). The definition of the IM process in TQM is expressed as 'intra-organizational marketing of products and services' so that the organization can achieve its goals and ensure customer satisfaction (Quester & Kelly, 1999). From this point of view, it is possible to say that the concept and process of IM is related to many fields. Institutional structure, business planning, and career process, employee motivation and commitment, TQM and HRM processes, and communication management are important areas to achieve organizational goals. The focus of the IM process on the employee-organization relationship is also reflected in the future plans and organizational success of the institution. Each element is interconnected in the IM process. The feeling of belonging to the organization and the high motivation of the employee can positively support the successful and balanced execution of external activities. Marketing-related IM elements can also be seen as contributing factors to HRM and TQM processes.

Internal Marketing in Business Life

In order for IM to be successful and efficient in business life, it was emphasized that it should be implemented with small and specific steps within the organizational structure. When we look at the first and past research studies on IM, it is seen that it is generally focused on certain departments and certain problems within the organization. It is at the forefront to be able to put the departments and employees in question into

customer-oriented action. Many studies have focused on employee behaviors aimed at positively influencing and maintaining customer relations. It is considered the duty of the managers to direct the employees in this direction within the company. The manager representing each level determines in which direction and at what level the employees in the relevant units will participate in the process. Therefore, IM activities should be implemented in a way to cover certain departments within the institution, not the whole institution (Pitt & Foreman, 1999). Within the three basic steps required in the IM process; There are strategies to satisfy the employees, to make each employee versatile, and to ensure internal continuity, but the evaluation of the employee as an internal customer within the organization can bring along various problems. Marketing activities and strategy primarily want to act by putting the customer at the center. Seeing employees as internal customers may cause external customers to stay in the background and not be given enough chances for the product or service they want to represent. In this process, the employee may feel restricted within the organization. Due to employee-oriented IM activities, customer needs may be ignored by employees. For this reason, it is expected that employees will be motivated by marketing-based activities, not institution-based, in order to act customer-first (Rafiq & Pervaiz, 1993). IM initiatives are seen as a complementary mechanism in the execution of organizational functions, as it is at the forefront of motivating and directing the employees in line with corporate purposes in IM. These approaches became widespread over time and paved the way for the I process to come to the fore and develop in corporate structures. With IM activities, internal conflicts can be minimized and units that resist change can be developed and brought back into the organizational structure within the IM cycle. The correct definition of the concept and process of IM and its adoption and implementation by institutions have brought about an increase in expectations from IM (Rafiq & Pervaiz, 2000).

Why is IM necessary in business life and within the organization? In answer to his question, it makes it possible for the close relationship between the employee and the customer to be brought together on common ground and carried out correctly. Within the scope of some research studies, it has been emphasized that IM activities have a positive effect on the quality of service offered in the market and the profit obtained. It supports the effective realization of organizational functions and plays a role in the future improvement of the institutional structure (Reynoso & Moores, 1996). A good level of service quality directly affects the amount of profit and price

increases in the market. The more the way and quality of service delivery develops within the institution, the more the profit obtained from the market will increase (Zeithaml, Berry & Parasuraman, 1996). IM is an initiative that can penetrate and direct all of the marketing activities carried out within the organization. It helps to ensure integrity in the organizational structure and between departments. IM can be located at any stage of business activities. It ensures that the goals and strategies of a business are conveyed to all employees in the service marketing process. In the business world, IM is a marketing strategy that the business carries out in conjunction with the human resources department. The business looks at the IM process from both sides. One side is the target audience in the market, and the other side is the employees who are in contact with the target audience. The point where the target audience and employees are evaluated as 'Internal Customers' is the internal marketing process. Marketing policies and organizational structure came together with IM. Marketing management and human resources policy act together to cover all employees in the business. Internal marketing activities develop sales policies by considering employees as customers so that the business can earn more profit and motivate employees. The more compatible the employee and the business are, the more qualified the service quality offered to the customer will be. In the internal marketing process, not only the product seller or service provider but also all employees in the business are considered potential internal customers. The target audience does not evaluate a product or service only on the basis of the brand. It includes the business policy and the employees as a whole while making the evaluation. Business and employee behaviors are also effective in the experience of the target audience in the purchasing process. In order for the internal marketing process to be carried out correctly, first of all, the communication of the company with the employees should be improved. Accordingly, the effect of communication will reflect positively on the target audience (Keleş, 2022).

Internal marketing activities are necessary in the formation of internal strategies in order to achieve external marketing objectives. In order to achieve success in the market, knowing the needs and wishes of the employees and meeting their expectations should be given importance by the businesses. In order to implement internal marketing within the company, the staff is divided into two parts. After the front line and support staff are determined, strategies for the target audience and internal customers are created. Front-line personnel are the first to contact and communicate with

the target audience in the market. Support staff are those who work in other parts of the business and will support the front-line staff in the background. IP activities are all-inclusive. It is aimed to assign different responsibilities to each of the employees, to develop qualified personnel within the company, and to influence external customers with qualified staff. With IM, service and management systems become easier to control (Keleş, 2022). The most important market in a service business is to develop a marketing strategy for employees and employees (Rafiq & Pervaiz, 1993). When all these dynamics are considered, it is seen that the story should primarily proceed through the employees in order for the business to carry out a successful marketing activity for the target audience. Employees are an important balancing element that acts as a bridge between the target audience and the business. Increasing the loyalty of the employee to the institution and supporting his motivation by establishing quality communication within the enterprise can directly affect the quality of products and services to be offered to the market. In the IM process, it is at the forefront to perceive the employees as internal customers and to act by keeping the dynamic within the business in balance, and it is thought that it will have a positive effect on the marketing activities to be carried out in the future. The basis of IM in the business world can be considered as being able to address the external customer through the internal customer by developing a strategy in the right direction.

Internal Marketing and Its Practice

One of the main issues that come to the agenda regarding internal marketing activities is the way and process of its implementation in the business environment. Are IM activities effective when inclusive of the whole business? Or should it be done by focusing on specific groups within the business that carry out a specific activity? questions arise (Pitt & Foreman, 1999). Comments and definitions on similar questions and uncertainties generally reveal that the IM process should be conducted through human resources managers, marketers, and senior administrative staff (Quester & Kelly, 1999). However, the opinion and misconception that IM is generally applied within the enterprise are at the forefront. Many organizations advocate the value and priorities they attach to their employees. The main reason for this misconception is that senior executives do not give due importance to internal IM activities. Selecting and announcing the successful employee of each month, providing temporary and periodic financial

support to the employees, and revealing the principles and values of the institution are not sufficient and effective practices for IM (Stershic, 2001). Interdepartmental ties and an expanded marketing mix (7P) are important for IM activities. The 'product', one of the elements of the marketing mix, is the work itself in the IM process. New initiatives for employees and training activities that will support their talents can also be seen as products in the IM process. Employees' adoption and psychological internalization of IM practices correspond to the 'price', which is another element of the marketing mix. While the place/distribution element in the mix can be represented by many things belonging to the working environment, the promotion effort can be considered as the communication between human resources and other managers with the employees (Ay & Kartal, 2003). Similar to the advertising and promotion activities carried out through various domestic and foreign channels for the target audience, which is the external customer, the rules, development, change, and transformation can be communicated among the employees within the company. External factors that support promotional activities and the IM process are included in the process as a third party. Employees are generally affected by the directions and behaviors of the managers closest to them. At this point, managers play an active role in implementing IM activities on employees (Rafiq & Pervaiz, 1993). Communication, technology, organizational culture and socialization, empowerment, and employee and customer satisfaction are very important in the effective and efficient implementation of IM activities (Ay & Kartal, 2003). In today's digital transformation process, the concept of technology has been included in many areas of life. The rapid development of technology and the digitalization process are closely related to the business world as well as individuals.

The concept of marketing is generally known as sales and promotion-oriented activities that are familiar to everyone. With the developing technology, businesses are trying to change their management structure and tend to increase the quality of their promotional activities. It is a need and necessary to be successful in business. Internal marketing activities play an important role in the business achieving its goals. Digitization brings with it innovations. At this stage, corporate identity structures and branding adventures of enterprises are changing. Increasing the satisfaction of employees and making their work easier in the digital world have come to the fore. Every employee carries the burden of product or service promotions for which he is responsible and is responsible for satisfying

the external customer. It is possible to reach a happy customer base with happy employees. Accordingly, it is very important to establish an effective communication system for qualified personnel within the enterprise. Correct company management is possible with an effective communication system. Creating management systems and providing services in digital form in light of the changing world and economic developments with technology is the main point that businesses should focus on (Keleş, 2022).

Roles of Metaverse in Marketing and Internal Marketing

Metaverse, as the near and three-dimensional future of the internet in the digitalization process, is among the most frequently spoken concepts today for Web 2.0, Web 3.0, NFT, Virtual Reality, Augmented Reality, Mixed Reality, and beyond. Metaverse, the near future of the existing internet world, has changed the form of individuals' feelings of belonging to the society and order in which they live and their socialization needs. Payment systems with NFT (Non-Tangible Token), statuses, classes, identities, and new image forms with Avatars began to emerge. Today, all the usual social forms and processes are getting ready to move to the metaverse world. The rapid change of the physical world and its transformation into various forms is a situation we are currently experiencing. Many researches and initiatives are in the direction that the near future will be established in the Metaverse and will continue. Individuals begin to communicate from the mother's womb and continue the process with family, kinship relationships, and social structure. The concept of socialization in the physical world is important for both the individual and the society to continue living in a sustainable form. The transformation that takes place in the individual and society is reflected in the daily life. The traditional social structure that existed in the past has begun to modernize today. In the traditional structure, the rules are rigid, the system is closed and interdependent. With modernization, social structure and relations have turned into a rational form and being a member of more than one group at the same time has come to the fore. With technology, sociocultural structures have changed and new social forms have been formed. In the modernization process, primarily communication technologies have developed. Virtual groupings and synthesis cultures have begun to form over social networks. With the Covid 19 and Pandemic process, the doors of online life have been opened and it has become possible to experience the usual daily routines in digital form in virtual form. Educational activities, the business world, various

activities, travel plans, online trips, and many other activities were carried out in the alternative virtual universe. Thanks to the Metaverse, known facts, individual lives, and social structures have begun to change (Türk & Darı, 2022). While the metaverse world offers the opportunity to pass from the known 2D world to the 3D world, it also brings different and rich experiences. It is known that social media and various applications make new initiatives using the term 'Meta'. Metaverse will contribute to people easily connecting with each other, acquiring new identity structures, repositioning in society, and the rapid growth of the business world (Kaya, 2021). Today, the new world, Metaverse, which is described as beyond the current universe, is the common space between virtual and real. It directly affects the entire society and real life. It brings with it a serious transformation. It has the power to completely change the habits of possession, belonging, revealing something new, and consumption in the physical world (Demirtaş, 2021). Well-known big and popular brands have started to open new stores in virtual form in the Metaverse world and have created new strategies to improve their advertising-promotion activities. Being able to operate officially in Metaverse will be possible with Blockchain and NFT. The fact that businesses open virtual stores and position their brands arose from the concerns of 'existence' and the desire to move their assets to the Metaverse. The products and services that will be offered digitally by businesses and brands will be produced in virtual form to meet the demands and needs appropriate to the place. Space Runners, which produces digital shoes for gamers and social media users, and H&M, a ready-made clothing brand, are the first companies to open stores in Metaverse. Being on the Metaverse platform has laid the groundwork for the concept of 'MetaStore'. It is possible to instantly see and examine the new collections of the brands with the Metastore established by the enterprises. It will be among the new habits for customers to shop in virtual form in the Metaverse universe instead of shopping in a physical environment. With VR glasses, it is possible to visit stores, make investments and participate in various activities online (Kurt, 2021).

The Metaverse is a man-made universe beyond the physical. Businesses and brands have started to prepare products and services for this currently inactive universe. It is among the popular topics that concern many sectors, especially the marketing sector. The question "are humanity and the business world really ready for this change?" comes to mind. In order to exist in Metaverse, deep analysis and plans must be made in terms of the sector (Kaya, 2021). With Metaverse, all existing obstacles and borders are being

prepared to be removed. It is possible to produce an unlimited number of projects in a new world and a new universe. The distance, time and economic concerns that exist in the physical world will be resolved in the new digital world. An architect will be able to design online and virtual streets in the new universe, psychologists will be able to meet with their online clients without interruption, music groups will be able to give concerts to their listeners in digital form at any time and place, and what is known in the business world will completely change. In the virtual streets and cities to be established in Metaverse, the promotion of products and services will also be made in virtual form. From clothing to beverages, from production to investment, all promotional activities will be followed digitally. Digital payment systems will be active when entering and exiting various environments within the virtual universe. For the business world, Metaverse also lays the groundwork for widening the gap between generations. The balance between employees and managers will change. Ways of doing business and legal and moral dimensions will need to be re-established. Change has begun and its continuation is rapidly coming (Kuşaksız, 2021). Various technology companies provide consultancy to facilitate the transition of businesses operating in the real world to the digital world. The transition process is seen as a long journey and it has become imperative to create new visions for the business world. This process will lead many companies to evolve. Since IM activities involve businesses and employees, this process is carried out by moving it digitally. First of all, employees should be taught not to spend a long time in digital, but to spend quality and productive time. The time to be spent in front of the screen and the activities to be carried out in Metaverse should be about doing better. Business life will sometimes continue in the physical world and sometimes in the three-dimensional environment. Metaverse offers the opportunity to establish a faster and more effective connection between people in the corporate structure. It will be easier for businesses to grow digitally. The interaction between individuals and the activities carried out will increase, and the content and experiences will become richer. The number of content producers and experts for virtual platforms will increase. Devices and platforms that will help the business world and individuals exist in digital are not obstacles, they are assets that will offer new experiences. It is necessary to prepare to exist with new assets (Toptaş, 2021).

Change and transformation have begun. In addition to individual lives, the business world also gets its share from the reality of Metaverse. All forms known and applied by heart are changing shape and transforming

with digitalization. The marketing industry is one of the pioneers in this transformation. Learning and getting used to being online is important for businesses and business professionals. It is possible to say that those who can adapt to this change in place and on time will be successful in the near future.

CONCLUSION

The metaverse reality has quickly become incorporated into our existing reality. The process, which started with individuals first, has been reflected in businesses and activities carried out by businesses with the change of form of daily needs and requests. Change is happening fast. The rules, moral and legal structure in the digital world are different from what is known. Metaverse emerges as an alternative virtual universe reality to the existing world. Our daily habits include phones, tablets, e-commerce, cryptocurrencies, social media applications, virtual shares and virtual communication, and 'Virtual Reality'. The boundaries of the concept of distance and time have disappeared, and the interaction between individuals has become uninterrupted. Being online and 'being present' in the virtual world is becoming the most basic need. The world of Metaverse, designed by human hands, is shaped by the light of technological developments. It can be considered an adventure where humans and technology come together. It is possible to talk about needs and desires where there are people. The reason for the existence of businesses is to present products and services to meet the wishes and needs of individuals. In the digitalized world, the form of requests and needs is rapidly changing and transforming from concrete to abstract. The main purpose of businesses and marketing activities is to address and satisfy the needs of target audiences. The priority is always the customers, who are the target audience, but it is the employees who come into contact with the customers first in the physical world. Employees play an effective role in the presentation of products and services to the market. In service activities, the motivation of employees and the way they communicate with customers are very important. The performance and behaviors of the employee in the field reflect the corporate identity. These behaviors can affect the purchasing behavior of customers in the market, and their attitudes toward businesses and brands in a positive or negative way. The business, employees, and target audience are part of a meaningful whole. They cannot be considered separately from each other. Each part has to act together and harmoniously. In the digitalized world, the transfer of business forms to the virtual universe and the concern about

existing in virtual reality are similar to the attempts of individuals to exist in the virtual with avatars. Businesses that have started to digitize will also include their employees in this process. The rush to exist with the marketing mix and marketing activities in the physical market will leave its place to businesses that work 24/7 in digital form and are in contact with customers. As important as meeting the needs and satisfaction level is for the customers, the same expectations are also present in the Metaverse environment. Happy customers bring happy businesses. Happy customers are possible with happy employees. The reason for the existence of happy employees is businesses. At this point, Internal Marketing plays an important role. The world can be digitalized, but in the existing reality, a business structure that motivates and supports its employees can easily achieve success. For this reason, it will be easier to transfer this success experienced in physical to digital. It is possible for the business structure that cares about real employees in the real world to provide the same dynamic in Metaverse. Employees who feel that they belong to the organization can also make the external customer feel belonging to the product and service offered. A highly motivated employee can motivate the customer in the market to make a purchase decision. An employee who can communicate effectively with his/her institution can also provide a harmonious communication environment to the customer in the market. While all these are stuck with the time and distance barrier in the real world, these barriers will be removed in the Metaverse world. An unlimited and wide area is being tried to be created in the virtual universe. The contents are rich and the promised experiences are quite different. Transferring the ways of doing business to the virtual and changing the form will also affect the existing authority figures. The structures of businesses and the strategies they carry out will change, and the communication and bond that employees will establish with the corporate structure in the digital world will be able to level up. The concepts of physical existence and existence are described in a similar way in digital. Needs, expectations, and emotions are the same. The contents will begin to go deeper. The promises of the corporate structure, its mission, and vision, the activities it carries out, and the products and services offered to the market will be transformed into Metaverse. Since this transformation focuses on being unlimited and uninterrupted, it is foreseen that intergenerational conflicts may arise in business environments as well as in daily life. Generational differences have always existed from past to present, but they can be experienced at a more shocking and destructive level when digital adaptation is forced. Today, those working in businesses

continue to follow a certain discipline and order authorities. The preparation of the physical environment and borders to be eliminated in the Metaverse paves the way for the formation of new forms of discipline and order. In the unlimited virtual world, individuals and employees can have a say in their own businesses or they can get lost in this new unlimited world. In this transformation, in which individualization and rationalization will increase, the responsibility devolves on individuals as well as institutions. Presence and belonging in digital should be reconsidered by in-depth analysis of social and social aspects with Internal Marketing and Human Resources Management and started to be implemented within businesses.

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