

THE IMPACT OF THE DIGITAL TRANSFORMATION ON THE HUMAN RESOURCES
PROCESS



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PROCESS

BY

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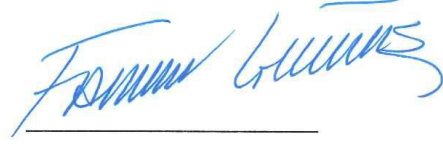
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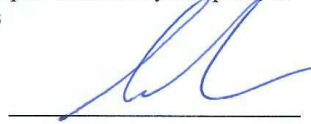
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ABSTRACT

This research was conducted to evaluate the impact of the digital transformation on the human resources processes. As a result of the research, it has been determined that developing technology influences human resources. This piece of research examined factors such as speed and time, cost, productivity, and communication. With the development of the digital transformation, technology has become one of the most important issues. Technology continues to affect all business units, sectors, countries, and people's communication. The advantages and disadvantages of technology continue to be discussed by institutions, organizations, and individuals. It is the primary responsibility of all people and organizations to be aware of the impact of technology and to take the appropriate steps forward. It is possible to analyze, evaluate, and turn the positive and negative effects of technology into opportunities. HR is one of the most important representative faces for external and internal customers of institutions and organizations. Managing information - which is one of the main objectives of HR departments - has become efficient, fast, and secure with technology. In all HR processes, for example in the recruitment processes, the experience that potential employees and candidates have with the organization is important in managing the perception of the brand. How a company is represented as an employer brand is directly passed onto the potential employee, current employee, and the candidate, positively or negatively. The orientation of employees directly affects their performance. It is very important to orient them in the best way in order to get maximum efficiency from the employee. Fair, timely, and effective performance and career management of current employees directly impact employee satisfaction and loyalty to the brand. It is important that HR departments obtain results from the internal data before they draw up an action plan. Considering

these reports when making investments affects the results of planning. The fact that companies with many employees make their communication through technology saves institutions cost, speed, and time – and it increases efficiency. In this research, semi-structured in-depth interviews were conducted with 15 participants working in HR departments in the technology, advertising, retail, software, education, communication, finance, e-commerce, gaming sectors. During the interviews, some of the participants felt at ease to answer the questions. Interviews took 60 minutes on average in an open-ended, experience-based and interpretative atmosphere, in which the participants were able to express themselves easily.

Keywords: *technology, digital transformation, human resources, the impact of the technology*

ÖZET

Bu araştırma dijital dönüşümün insan kaynakları süreçleri üzerine etkisini değerlendirmek amacıyla yapılmıştır. Araştırma sonucunda teknolojinin insan kaynakları üzerinde etkisi olduğu tespit edilmiştir. Araştırma sonucuna göre hız, zaman, maliyet, üretkenlik ve iletişim gibi faktörler belirlenmiştir. Teknolojinin gelişmesi ile dijital transformasyon günümüzün en önemli konularından biri haline geldi. Teknoloji tüm iş birimlerini, sektörleri, ülkeleri ve insanların iletişimini etkilemeye devam ediyor. Teknolojinin getirdiği avantajlar ve dezavantajlar kurum, kuruluş ve insanlar tarafından tartışılmaya devam ediyor. Teknolojinin etkisinin farkında olmak ve buna uygun planlar yapmak tüm insanların ve organizasyonların temel sorumluluğunda. Teknolojinin pozitif ve negatif etkilerini analiz etmek, değerlendirmek ve fırsata çevirmek imkan dahilinde.

İnsan kaynakları kurum ve kuruluşların dış ve iç müşteri için en önemli temsil yüzlerinden biridir. İnsan kaynakları departmanlarının temel amaçlarından biri olan bilgiyi yönetmek ancak teknoloji ile verimli, hızlı ve güvenli hale gelmiştir. Örneğin insan kaynakları süreçlerinden işe alım süreçlerinde, potansiyel çalışanların ve adayların kurumla yaşadığı deneyim markaya olan algısının yönetiminde en önemli etkenlerden biridir. İşveren markası olarak bir şirketin nasıl temsil edildiği potansiyel çalışana, mevcut çalışana ve adaya direkt pozitif ya da negatif olarak yansımaktadır. Mevcut çalışanların işe alındığında doğru bir oryantasyondan geçmesi performanslarını direkt olarak etkiler. Yeni çalışandan maksimum verim alabilmek için, en iyi şekilde oryante edilmesi çok önemlidir. Mevcut çalışanların performans ve kariyer yönetiminin adil, zamanlı ve etkili bir şekilde yapılması çalışanların mutluluğunu ve sadakatini doğrudan etkiler. İnsan kaynakları birimlerini hareket planı çıkarmadan önce şirket içi verilerden sonuçlar elde etmeleri ve yapılan yatırımı buna

göre planlamaları en doğru sonucu elde etmelerini sağlar. Çok sayıda çalışana sahip şirketlerin iletişimlerini teknoloji aracılığıyla yapmaları kurumlara maliyet, hız, etkinlik ve zaman kazandırır. Bu araştırma kapsamında teknoloji, reklamcılık, perakende, eğitim, iletişim, finans, e-ticaret, oyun sektörlerinin insan kaynakları departmanlarında çalışan 15 kişiyle rahat bir ortamda sohbet havasında ortalama 60 dakikalık yarı yapılandırılmış derinlemesine görüşmeler yapılmıştır.

Anahtar Kelimeler: teknoloji, dijital dönüşüm, insan kaynakları, teknolojinin etkisi



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INTRODUCTION

It's a fact of our era that the development of technology has brought about the digital transformation. All institutions and organizations are affected by the transformation of technology. It is up to institutions turn this change into an opportunity and benefit from this transformation. Institutions should observe the positive impact of technology and take initiative, analyze the negative impact and take measures to avoid potential pitfalls. HR processes are the face of a company for both its internal and external customers. The effective use of technology by HR departments of companies is crucial for employer branding. Companies can ensure the speed, cost, time, and efficiency advantage by integrating technology into HR processes. Companies must take precautions against possible problems such as communication accidents that may arise from the use of technology. The aim of this research is to measure the impact of technology change in HR departments and business processes in different sectors. This study examines the history, process and future of the digital transformation; workflows in HR departments; and the positive and negative effects of technology on HR processes.

The reason behind choosing this topic is to observe how institutions and organizations are affected by ever-evolving technology. As someone who has witnessed the digital age, the aim is to observe its impact on Human Resources processes. As a firm believer in the power of technology, my main goal was to analyze the advantages and disadvantages of technology. Since the moment I began my professional life, I have been working at companies that heavily make use of technology. In choosing this topic, I wanted to see the advantages of technology such as homeoffice and its place in Turkey's marketplace.

Chapter One

1. Human Resource Management

This part of the study includes the definition of human resource management, the scope, responsibilities, features, importance, objectives, history, models, electronic human resources management, as well as examples or applications.

1.1. Definition of the Human Resource Management

There are several definitions regarding the concept of HRM. Some of those include the following:

HRM is an art that has the kind of functionality that will achieve, develop, and maintain the potential workforce in a way that will achieve all its objectives at the highest level in line with the vision of the institutions and organizations (Bingöl, 1990).

HRM is the department responsible for providing and executing existing human resources in the most efficient way in order to achieve the goals created by the institutions and organizations in accordance with their strategies (Aldemir, 2001).

HRM develops strategies that are appropriate for the corporate culture for the most important asset of institutions and organizations and, therefore has a very important function for institutions and organizations (Fındıkçı, 2001).

HRM is the department that enables the institutions and organizations to reach the targeted number and quality of the employees in line with the needs and to ensure that the target group is used in the most efficient way (Bingöl, 1990).

To summarize the above definitions, all employees of the institution or an organization need to be acquired, managed, developed, and motivated by the HR departments to ensure the maximum benefit that aligns with the company's vision, culture and goals.

There are two objectives of the HRM:

1-) Adopting the objectives of institutions and organizations and selecting candidates in accordance with the corporate culture in the most effective way to benefit the institution to run and make this work sustainable, and

2-) To increase the quality and efficiency of the employee and the employer.

To summarize these two objectives, it's necessary to ensure an efficient work environment to increase the productivity of the employees and to make them happy about their work (İlker, 1992).

1.2. Scope of Human Resource Management

The scope of HRM is quite broad: it includes determining the number of employees required for institutions and organizations, making the necessary announcements to meet this need and selecting the right employees based on the incoming demands, adapting these employees to the corporate objectives and culture, ensuring the motivation of the employees, training of the employees and evaluating the performance of the employees (Sabuncuoğlu, 2000).

The HR department covers all levels of employment in the company - from the CEO to the entry-level employee within institutions and organizations. In addition, candidates who are potential employees for institutions and organizations are also in the target group of HR (Şimşek, 2004).

1.3. The Responsibilities of Human Resources Management

All employees fall under the responsibility of HR departments regardless of their duties and titles. HRM is responsible for all these employees from the first day of employment until the last day they leave or retire. The HR department is responsible

for recruiting all these employees, developing their knowledge and skills, evaluating their performance and ensuring they are motivated during this whole process (Özgen, 2002).

HRM is responsible for determining the number and quality of the employees needed by the institutions and organizations, providing the necessary advertisements for meeting this need, selecting the best and most competent employees for incoming applications, and educating them to adapt to the corporate culture. The responsibilities that fall under HRM include the efficiency, motivations, performance evaluations, and adoption of the employee to the corporate culture (M.A. 2004).

According to Sabuncuoğlu, the duties and responsibilities of an HR department are as follows:

- i. Human Resources Planning:** Determining the number and quality of potential employees by revealing the existing workforce of institutions and organizations,
- ii. Business Analysis and Definitions:** Job descriptions and job title of all business areas that falls within the business's needs,
- iii. Finding and Selecting Employees:** Assessing the job descriptions in the technical, health, and qualifications of the most appropriate candidates and managing the recruitment processes,
- iv. Employee Training and Career Development:** Training of employees so they can work more efficiently to ensure the needs of the institutions and organizations are met and making career plans of individuals within the organization,
- v. Performance Evaluation:** The measurement, evaluation and completion of actions to be taken at the end of evaluation,

vi. Job Evaluation and Pricing: Grouping according to the quality of the employees and planning a fair remuneration by ensuring a balance of all income-expense,

vii. Industrial Relations: Managing communication with trade unions; negotiations and collective bargaining with all the financial and social opportunities as a result of these negotiations,

viii. Occupational Health and Safety: Work for the protection of employees in terms of health and safety,

ix. Information Systems: Making human resources more regular and systematic due to data density,

x. Personnel Affairs: Completion of all bureaucratic works of personnel in the process.

1.4. Features of Human Resource Management

The responsibilities for HRM include identifying the resources needed by institutions and organizations, conducting promotional activities in order to provide this resource, and then providing this resource. In addition, it works to ensure that the current resource is adapted to the job, educated, motivated, and aligned to the corporate culture in such a way that the institution or organization benefits from this resource in the most efficient manner (Menekşe, 2004).

According to Fındıkçı, the properties of HR departments are as follows:

xi. HRM tries to prevent the aging of information of individuals caused by rapid change and development as well as the increase in knowledge and to provide the individual development of employees.

xii. HRM is the most important component of every organization, the management of the human element, personnel management, industrial relations, and employees. It covers human-centered functions such as satisfaction, motivation, career plans, performance evaluation, recruitment, compliance programs, training, and development.

xiii. The purpose of HRM is to ensure the success of the institution. For this purpose, HRM, personnel management and industry relations are combined with the management of employees using data from educational, psychological, and behavioral sciences.

xiv. HRM is not limited to a technical job that regulates the relations of employees with the institution and the state, such as personnel management, but also a function that contributes to the management of the organization as well as corporate functions such as accounting, marketing, and production.

xv. HRM works to improve employee loyalty within the organizational environment and to ensure the establishment of a corporate culture.

xvi. HRM is a discipline centered on people who have brought a different perspective to business relations that emerged in the 1980s with its technical features and applications.

xvii. It is very difficult to reduce and define the HRM to concrete definitions. This is because, human relations - which is an occupational field within this discipline - is a continuum. This is a holistic approach to the continuity of each event and should be addressed in its own environment. Regardless of HRM, the management of the relations of employees is the basis of HRM.

xviii. HRM deals with the expectations of the tensions between the employees as a result of the division of labor in the institution. It tries to ensure that the employees,

and the organization meet not only the different expectations and interests but also common goals.

xix. HRM is not a part of human relations in the corporate environment. In other words, HRM tries to understand and examine the details of the organization without ignoring the whole organization.

xx. The source of power has changed in hierarchical businesses today. Authority-based management, managerial positions, and roles are widely discussed. The field of expertise, teamwork, and cooperation are now at the fore. HRM seeks to ensure the requirements and conditions to help realize this cooperation.

xxi. Today, people are increasingly interested in information business. Therefore, employees who are seen as the source of knowledge will be the main feature of organizational structures in the future. HRM prepares information for organizations that is suitable for training HR. In doing this, knowledge is human work, it gives more importance to human beings as the source of logic and information (Fındıkçı, 2001).

1.5. The Purpose and Importance of Human Resource Management

HRM has a broad scope of responsibility and focuses mainly on human relations in institutions and organizations. In today's world in which employees are the most significant asset of all institutions and organizations, it's of utmost importance both for the aim and future of the company that HRM is done correctly. HRM also consists of a need for the right decisions and management when it comes to these employees (Şimşek, 2005).

In the century we live in, implementing change in processes has become a necessity. HRM has become an internationally important area for all institutions and

organizations. Leading scientists have stated that the process of change is something that institutions and organizations need to pay much attention to in order to do their best. In the 1940s, a management approach based on people-oriented human relations, which was as a rival to the classic understanding of management, was adopted. It was understood that the employees of the organizations were the most important assets for the organizations (Aykaç, 1999).

HR has four main objectives:

xxii. The Social Purpose: To respond to requests and demands from the community in the most appropriate way for the institutions and organizations, to minimize negative pressure from society, and to respond to the needs of the society,

xxiii. The Organizational Objective: To be the agent and provider of the main objectives of the institutions and organizations,

xxiv. The Functional Objective: To exist to the extent required by institutions and organizations,

xxv. The Personal Objective: To assist employers in achieving their goals, to provide employees with the needs of institutions and organizations; to support, to motivate, to educate and to measure the performance of these people (Dinçer, 1996).

All decisions made by a HR department should meet all four objectives. If all the work provided by the HR department serves these four purposes, all employees and employers of institutions and organizations will benefit from the HR department to the highest degree (Dinçer, 1998).

1.6. The History of Human Resources Management

To understand and explain the strategic importance of the functions and responsibilities of HR management, it is necessary to understand the development of

Human Resource Management (Fındıkçı, 2001).

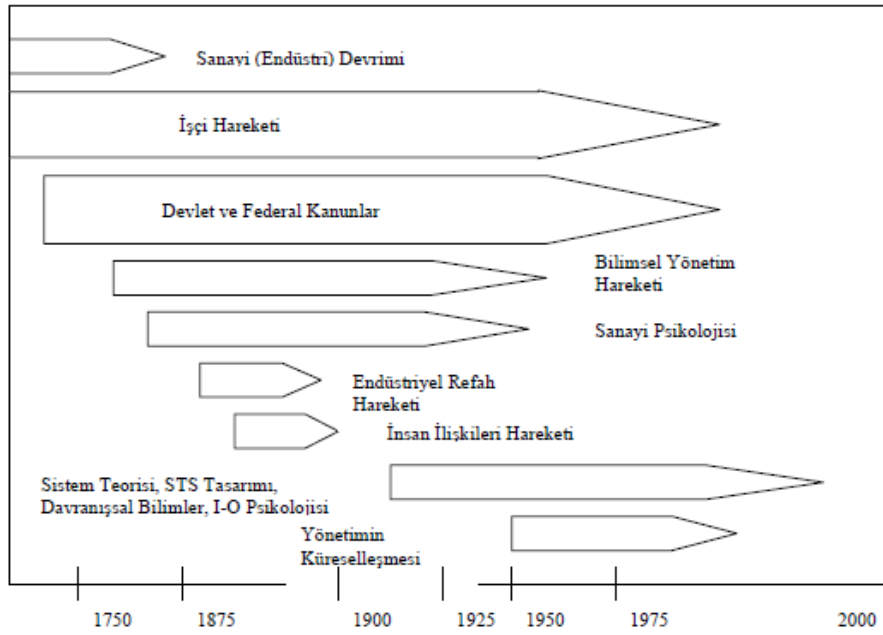


Figure 1.1: Evolution of Human Resources Management (Approximate time periods)

Source: Wendell L. French, “Human Resources Management”, USA, Houghton Mifflin Company, Boston, New York, 1998, s.38.

In the history of employee and employer relations, the concept of slavery in ancient Greek and Romans stands out. There were hierarchical classifications in the guild organizations in the Middle Ages based on the qualifications of employees. The present employer-employee relationship did not emerge until the 18th century onwards. Relations between workers and employers were revised with the onset of the significant of freedom, justice, and equality in the French Revolution. After the emergence of these concepts, we begin to see an increase in unionization (Tortop, 1999).

Mechanization – which began with the Industrial Revolution – brought with it the scientific applications and analytical thinking. Under the leadership of F.W. Taylor,

ideas and techniques were developed as ways to increase the performances of workers that played a role in production. The innovations brought forth by the Industrial Revolution were reflected in business life and focused on human beings, which has been the most crucial factor of business life over time. Employees' performance, motivation, ways of doing business, and compliance with the organization began gaining importance for the entire industry. Determining the needs in business life and then providing these jobs to the candidates who have the most suitable job descriptions have yielded concrete and productive results. The process of mechanization shed light onto the importance of the roles played by humans as well as directing, managing, and performing. Human beings are involved at every stage of production, and the services sector is the most important feature of post-industrial society's role in business life. HRM has been of strategic importance since the 1980s due to competition among international companies. While institutions and organizations can copy the technological developments in production, they do not have the opportunity to gain, grow, and develop HR through technology (Gates, 2000).

The concept of HRM is a concept of management part and parcel of today's business life. By tracing historical developments, we can see that the management approach - which began with scientific management - was replaced by HRM. The modern management approach has been adopted with the concept of HRM, and institutions and organizations have been able to address issues such as motivating, educating, developing, and meeting the needs of employees (Keser, 2005).

1.7. Human Resource Information System:

The Human Resources Information System are collections of data used to archive, analyze, organize, and share all information related to all HR processes and activities of institutions and organizations (Aydın, 2007).

This is a system that enables institutions and organizations to organize, archive, and analyze the data they produce and consume while managing all HR activities, and then they are arranged to be used in making managerial and strategic decisions (Tonus, 2004).

1.8. Electronic Human Resource Management:

Electronic Human Resources Management is the redesign and realization of the relations and processes of the institutions and organizations with the employees. E-HRM, HRM of all activities of the computer environment, interactive and electronic media to be able to use. The main aim of E-HRM is to ensure the motivation of the employees and to integrate all services into HRM (Özden, 2004).

Sustainable work and planning are needed to change the implementation of traditional HRM and adapt today's technology to new applications (M.A. 2004).

1.8.1. The Methods and Examples of Electronic Human Resource Management:

The main applications of HR units with technological developments are as follows:

xxvi. Employee Handbook: This is a booklet that contains basic information about the curriculum, corporate culture, and policies for new employees. Printed handbooks are costly, because they require a budget for printing and are not easily revised when necessary. In digitizing these booklets, they can be accessed, replicated, and reproduced quickly.

xxvii. Phonebook: This is the database where employees store their e-mail addresses, phones, job positions, and any other contact information. Based on the research, it is much quicker to transfer and learn information in digital environments than through traditional methods as it can be updated frequently and quickly so that virtual operators can use their time more efficiently.

xxviii. Useful Information: The data that all the information required by the employees of the institutions and organizations have been digitized. Thus, information such as healthcare and career plans - which are often in flux and shared - is made available in a fast and convenient way. In this way, a source of frequently asked questions for the HR department is formed, and HR employees are not unnecessarily engaged in this resource for information.

xxix. Retirement Plans: The details of employees such as personal retirement plans, bank account information, investment options, and forms are archived, organized and used in this computer environment. This system prevents employees from responding to all questions related to retirement separately, which is required for the HR department, and helps them evaluate their time and labor more efficiently.

xxx. Surveys and Research: Various methods allow to save both time and labor, such as a questionnaire used by institutions and organizations to conduct research on their current applications and potential changes. Thanks to this technology, research

can be conducted faster, easier, and cheaper, and then the required changes can be made. This allow for the elimination of problems and the easy implementation of changes. Following from this, it allows for the improvement of business processes.

xxxii. In-house Job Options: Institutions and organizations publish potential business opportunities on the internet and archive their employees' career plans electronically. Compared to the traditional way of posting job advertisements, information dissemination in a digital environment can be done more quickly, directly, and clearly via the internet. This type of application provides for increased application, employee loyalty, rapid of the rotation, as well as development and growth within the institution.

xxxiii. Personnel Procurement: Acquiring personnel to meet the needs of institutions and organizations and making job announcements requires time, cost, and effort. There are more applicants when advertisements are posted on the internet; this also allows for the HR department to search for more specific criteria and to more quickly access candidate information. In other words, recruitment processes are faster, more efficient, and simpler.

xxxiiii. Candidate Analysis: In the digital environment, the information of several candidates can be quickly analyzed by using keywords based on the skills needed. With this filtering option, identifying the right candidates becomes fast and easy.

xxxv. Organization Charts: The structure and organizational chart of employees can be revised quickly on the internet, and employees can then make use of this information.

xxxvi. News Bulletins: Employees, customers, and partners can be notified immediately regarding product updates both inside and outside the company.

xxxvi. The Company's Activity Calendar: This application creates an electronic timetable that indicates yearly holidays and special occasions for the company's employees. Whoever is in charge of the calendar can quickly and easily make updates accordingly, and the employees can then be updated on this information.

xxxvii. Employee Announcements: It is a digital environment in which institutions and organizations and employees publish their information. Thus, this increases the loyalty of employees towards the company.

Developments resulting from technology have created great value in terms of time, cost, and labor productivity in business functions. HR has accelerated the basic communication, processes and planning between departments such as marketing, sales, production, finance, and reduced the bureaucracy and hierarchical structure, saving time and making it more efficient.

1.8.2. The Examples and The Importance of E-HRM Applications:

1.8.2.1. E-Recruitment, Selection and Onboarding

Using traditional methods in recruitment processes leads to a loss in terms of cost, time, and labor for institutions and organizations. When there are many applicants applying to an institution or organization, the HR department loses a lot of time filtering and categorizing these candidates. For instance, if a company doesn't need a high school graduate for a position, then it's unnecessary to review and evaluate candidates who have graduated from high school. If CVs are not digital but printed on paper, then this can lead to unnecessary paper stacks and increased costs. Transferring CVs to the digital environment allows for savings on paper costs, time, and effort spent. The time spent analyzing CVs is unnecessary in terms of the

company costs. It would be a waste of time to reach out to candidates one-by-one who fail to pass the first assessment. To eliminate these problems, the best solution is bringing technology into the HR department.

Since 1993, institutions and organizations have begun publishing their job advertisements in print media such as newspapers. By changing to the concept of the internet-based recruitment, companies were able to decrease its costs and reach to the island with the right quality.

1.8.2.2. E-Performance Management:

Today, unlike traditional methods, performance evaluations are carried in a digital environment, which includes several individuals such as colleagues, managers, employees, and customers, who can observe employees and provide feedback from different perspectives (Menekşe, 2004).

As part of the traditional performance evaluation practices, employees filled in printed forms and forwarded them to HRM departments. But now HR departments handle, analyze, and report all results of the evaluation by using a computer. In the 360-degree evaluation, the whole process is optimized, since the whole process takes place online, and no time or effort is spent on adding, archiving, or editing data.

Electronic systems that have this 360-degree approach and achieve a more equitable and unilateral result in evaluating employees from the perspective of different people in contrast to traditional methods. Even organizations with many employees can conduct performance evaluations quickly, efficiently, fairly, and easily by using this method (Dinibütün, 2004).

1.8.2.3. E-Payment:

For traditional wage management, HR departments were required determine payments in terms of periods, criteria, and amount. It's accepted in the literature that wage management is based on the results of the job evaluation with the data obtained from work analysis. Accordingly, the salary of the position is based on the work done in each position (job description) and the qualifications required for the job (job qualifications) (*Çokuluslu İşletmelerde İnsan*, 2006).

1.8.2.4. E-Talent Profiling:

Technological developments have led institutions and organizations to think about reducing costs and increasing efficiency. Institutions and organizations visit the websites of employees and potential customers and encourage them to do business online. In the past, institutions and organizations presented their products and services to the customers themselves, and now potential customers can visit company websites and get information about the company as well as its products and services. Institutions can provide customer-specific services, can produce them in line with the customer's specific requirements, and deliver them quickly – and this is done in an environment in which the competition is increasing in the business world (M. A. 2004).

1.8.2.5. E-Career Management:

With the global aspect of businesses, problems have risen in career planning and management in human resources functions. In today's competitive environment, enterprises are trying to make use of technological opportunities in the most efficient way in order to develop and become more sustainable. Adapting to the changing technology has turned into a necessity and need (Şimşek, 2004).

Computer technologies are used to realize possible application in the field of

career management. Strategic Career Management System (SCMS) is the name of a newly developed application in this field. Research supports this method as it encourages employees to develop their own careers. Software and resources such as SCMS in career development have taken on the role of the most useful experts and resources to develop in a person's career (M.A. 2004).

1.8.2.6. E-Learning

E-learning is extremely critical for organizations, particularly ones that have employees in different locations, to train their employees in product, policy, technical, and specialty areas and to give conferences. For example, a group of 3M employees experienced big savings in cost by attending an image-gathering meeting held with in two-month worth of videoconferences, which were attended by educators from different locations in the Americas and Europe. The internet and technology cost reduced by 1 to 1, while the internet would have caused a lot of cost without the option of training with videoconferencing (Neo, 1999).

Nowadays, new methods have emerged and changed in the field of job-training as in every field with developing technology. Companies have now abandoned traditional training methods and have started to use new educational technologies (M.A. 2004).

Chapter Two

2. Digital Transformation

This section of the thesis examines the importance, history, scope, purpose, definition of the information technology, information systems, and the digital transformation.

Definition of Technology

Software, hardware, communication systems, internet, database, such as technology issues, including the basic issues, information management system is very critical (Odabaş, 2005).

Definition of the Information Technology

Information technology is defined as the applications that provide information needed by managers of institutions and organizations when making strategic decisions and that lead to the improvement of the processes within the organization (Beşkese, 2008).

2.1 The Definition of the Information System

Information systems are systems that manage all the information owned by institutions and organizations. The system represents the processing of all information that has been entered and used. According to Behan and Holmes, information systems are the series of employees, programs, and processes that process all the information that will serve the purposes of institutions and organizations and regulate such data to be meaningful in terms of management. The information system is an organized system for organizing, processing, archiving and sharing the information to meet the needs of the organization (Harrod, 2000).

2.2 The Definition of the Digital Transformation

In the 1960s, Marshall McLuhan became the focal point of technology and started to be the subject of communication studies. McLuhan describes the current state of digital communication in those years before knowing what today's technological landscape would look like: a modern-day digital world that would link people together and shape the world as a global village (McLuhan, 2005).

McLuhan thought that the public sector with printing and electricity is the cause of the masses. With the dissemination of communication – which began with the printing of the first book of the 15th century – there have been major changes in the last century. The widespread use of both electronic and communication tools accelerated together, and it was at its highest level with the rise of the internet (Tassel, 2010).

2.3 The Structure of the Digital Transformation

The Second Machine Age, otherwise known as the digital transformation, has transformed production into something that focuses on industry, manpower and production, access, interaction, and cooperation and aims to create value (McAfee, 2014).

2.4 The Purpose and Importance of the Digital Transformation

The collection, organization, accessibility, and security of information as well as archiving information are of strategic importance for computer and communication technologies (Tang, 2002).

2.5. The Examples of Digital Transformation

2.5.1 Office Automation Systems: Office automation is the application of information technologies that provides coordination and communication between the processors, producers, and consumers of the data of institutions and organizations. The examples of office automation applications include software that enables viewing, editing, and the sharing of all printed documents, as well as electronic communication tools that enable employees to communicate with location and voice independently, fax machines to share documents, and electronic calendars that allow employees to schedule jointly (Güler, 2008).

2.5.2 Artificial Intelligence and Expert Systems: Understand the structures that understand and say the people, the emotions of the objects and people, can define the behavior of people, if, then the rules of the application, large data and problems that can analyze and analyze the structure of the problems quickly and easily (Güler, 2008).

2.6 The Development of the Internet

The internet has progressed to web 1.0, 2.0, and 3.0 respectively. Initially intended to support one-way communication, the location of 1.0 was a double-entry input-output, a user-generated virtual platform for content. Then, the web 3.0 brought in by the digital era enabled us to process, archive, and link connections between virtual users.

The Development of the Internet and Technology Consumption

Information Communication Technology (ICT) was already developed in the 1970s, According to data from 2014, it became a \$5 trillion sector (ITU, 2015). In 2014, 53

billion people were using mobile phones (Meeker, 2015). Among the most valuable companies on the stock market, BIT companies were worth \$2.4 trillion in 2015, from \$16.7 billion just a decade earlier (ITU, 2015). SIM card users reached 7.6 billion, internet users hovered around 3.2 billion (ITU, 2015). In Turkey, the ICT sector is valued at \$34.3 billion dollars (TUBISAD, 2015).

The world's largest economy among the 17 who reached the Sequence Turkey, despite having both population of 1% in the world for both economies in the global ICT sector has reached up to 0.75%. While pointing out the growth potential of this sector in Turkey, the areas focused on by Turkey's ICT sector show high growth of 0,4% in the global information technology industry (YASED, 2015).

Smartphone subscribers throughout the world grew by 24% in 2014 to reach 2.1 billion. If we use this as an example, in countries with more than 50 million inhabitants, GDP per capita is higher than 50% in countries with 44,000 people. In countries with a population of over 50 million and a GDP of 13 per person, smartphone use is below 50%. Vietnam, Egypt, Iran, Pakistan, Nigeria, Brazil, Indonesia, China, India, Turkey, Italy, Thailand, the Philippines, Mexico, total non-smart phone use in countries such as Russia and Burma are 3.2 billion (Meeker, 2015).

According to data from 2014, the amount of data traffic increased by 21% compared to the previous year, and 64% came from internet video traffic. On the other hand, mobile traffic increased by 69% in 2014. In 2014, video traffic increased by 55% (Meeker, 2015).

Based on data from 2015, 53% of the 7.3 billion people around the world live in cities, 3.2 billion people are using the internet, and 5.55 billion are mobile phone subscribers (ITU, 2015).

The Development of the Mass Media

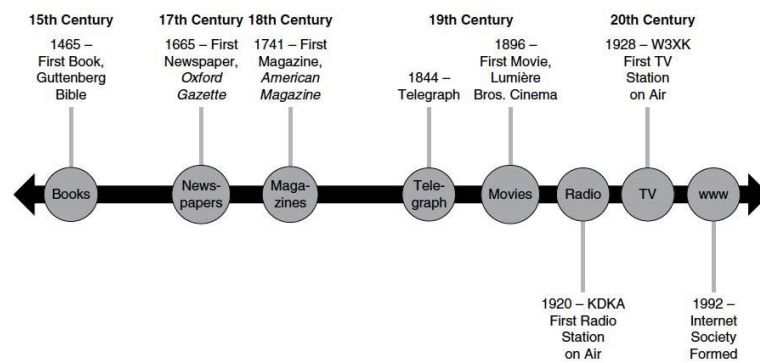


Figure 2: The Development of Mass Media

Source: The History of the Mass Media, Joan Van Tassel, Lisa Poe-Howfield, *Managing Electronic Media - Making, Marketing, and Moving Digital Content*, Focal Press, USA, 2010, p. 2nd

Chapter Three

3. Impact of the Digital Transformation on HR Processes

3.1 Impact of the Digital Transformation on Business

According to the results of the surveys conducted by a company on 200 institutions and organizations of the Internet 90% of the Internet, corporate networks and internet 78%, e-mail 7%, wireless communication 64%, 60% of portable computers, audio, data and visuals to be shared As a result, 54% and 11% were important.

The components of the rapidly developing IT are computers, electronics, and telecommunication technologies. Together with the developments in technology, these three components are unified to become a single entity. Information technologies - which provide deep-rooted innovations such as the gathering, organizing, archiving, and sharing of information - have been a system that has changed the product and production processes of the sectors, decreasing the costs of institutions and organizations and creating a competitive advantage (Tokol, 2000).

The technology, which helps all data on the internet become valuable, directs us to change all of our ways of doing business in all areas of life (*The Economist*, 2015).

The invention of the wheel, the steam engine, and the technology that provided a turning point after the invention of electricity are among the indicators that the revolution will provide a much deeper and greater change than previous revolutions (Banga, 2015 & Morris, 2010).

The digital transformation, which enables direct communication of institutions and organizations with target audiences, has provided a variety of media channels, created more accurate content for target audiences, and created new areas of

expertise (Dietrich and Livingston, 2012).

When we look at the Organization and Information Technology Compliance Model, we can see that information and technology used by institutions and organizations for their strategies, management processes, and HR is significant and related. There is interaction and harmony among these elements.

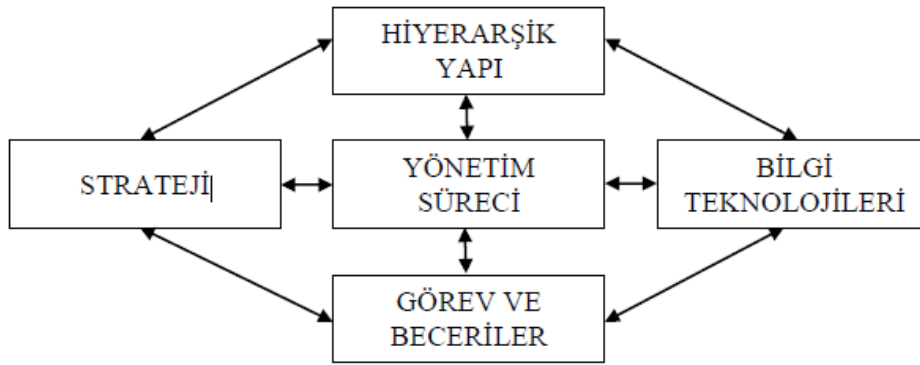


Figure 3: The Organization-Information Technology Compliance Model (Yusof et al., 2008)

Source: Yusof, M.M., Kuljis, J., Papazafeiropoulou A., Stergioulas L.K., 2008: An evaluation framework for Health Information Systems: human, organization and technology-fit factors (HOT-fit), *International Journal of Medical Informatics* 77, 386-398.

Advanced countries and information societies use information and communication technologies; in other words, ICT is the most important factor in the development of countries. Enterprise-based business processes should be replaced by service-based business processes; bureaucracy should be reduced and instant interaction should be ensured (Aydın, 2007).

Information technologies that process, collect, archive, and accelerate communication by making data accessible have an important effect as it facilitates communication with the internet, e-mail, and video calls (Aksoy, 2005).

Technology is the most important factor for institutions and organizations, not only production but also in how it affects communication and loyalty (Aksoy, 2005).

Computers have become a competitive factor among institutions and organizations due to the high cost and complexity of communication. Computers connected to the internet have greatly reduced the cost of communication; furthermore, that has allowed for distances to be eliminated and for companies to accelerate their growth.

3.1 Impact of the Digital Transformation on Marketing

The world of marketing has also been influenced by the impact the digital transformation has had on every aspect of our lives. According to Gartner's research, it was predicted that by 2017, more marketing departments will invest in more in digital technology than that of the information systems departments within institutions and organizations (*Marketing Türkiye*, 2016).

In a December 2014 article entitled *The Brand Age* published by Social Media and Communications Consultant Ercüment Büyüksener, he argued that the traditional methods of branding are now over and that the digital transformation has changed brands. According to Ercümen, the digital transformation is a sustainable long-term process ranging from operating in social media to carrying out digital campaigns

(Ercüment, 2014).

3.2 Impact of the Digital Transformation on HR

Information technologies are used by HR departments in the Information Age to collect, archive, correct, analyze, and share information.

With the resources brought by technology, HR departments have become strategic planners from a non-managerial position and managed to influence employees at the management level with the information sources it provided. To date, departments have not been able to obtain efficient data; they cannot analyze this data, but the systematically analyzed data together with technology makes the results more efficient (Greengard, 1994).

We can understand the reasons underlying the competition of institutions and organizations when it comes to speed, efficiency, and simplicity by better understanding the strategic HRM and the reasons that are effective in its development (Gary, 2000).

HRM is in the process of change and transformation from record conservation to strategic partnerships. The process can be summarized in four stages. First stage is that the strategic planning team and the HR team moved from independent studies to the second stage to ensure joint strategy and action. After the third phase, where there's a strengthening of communication between the HR and of the strategy, HR has evolved into the fourth stage, which is to deal with unexpected situations and deepen this responsibility (Akmehmet, Uğur and Kurt, 2005).

The websites that include all information about institutions and organizations explain their own strategies and corporate culture and collect candidates. Some HR departments contribute to the company's brand awareness by explaining the

company's culture, opportunities, and training facilities, and the employer's brand, the company can make the company as a preferred companies (Keleş, 2004).

3.3 The Impact of the Digital Transformation on HR Process

Technology has influenced every sector and unit, as well as HR departments. Some of them include the following:

3.3.1 Information dissemination

The digitization of information sharing is the first step in the development of HR. In the first phase, institutions and organizations include all information inside and outside of the company and include one-way communication. This information includes company policies, procedures, company history, announcements, newsletters, news, organization information, tasks, and an activities guide.

3.3.2 Creating a Database

This is a database that includes employees' demographics, business calendars, salaries, health, retirement records, as well as their fields and responsibilities.

3.3.3 Basic Human Resources Operations

This includes the electronic archiving of all information and documents within institutions and the simultaneous updating of information such as new assignments.

3.3.4 Complex Human Resources Operations

Complex HR operations includes evaluating the employee performance based on their duties and responsibilities, making use of this data, and doing

multidimensional analyzes to make business processes more efficient.

3.3.5 Network Based Human Resources Operations

These include in-house intranet-based applications and all bureaucratic processes between employees and managers, which are done electronically without using paper. This includes e-recruitment/selection, placement, e-learning, e-development, e-evaluation, e-performance, e-pricing, e-business and talent profiling, e-career management, and planning. Many HRM responsibilities carried out with traditional management can now be carried out in digital media (Keleş, 2004).

Chapter Four

4. A STUDY ON THE IMPACT OF THE DIGITAL TRANSFORMATION ON HR PROCESSES

4.1 The Aim and Scope of the Study

In recent years, the internal and external communication types of institutions and organizations, the ways of doing business on a day-to-day basis, and the speed and method by which they have completed their work all have undergone rapid change. Now, doing business within a short period of time has become an indispensable competitive advantage in competition for institutions and organizations. The usage of computers and the internet in business processes has increased the speed of enterprises. Providing workflows through computers and the internet has led to lower costs. The internet and computers are able to facilitate communication to remote locations quickly. This rapid flow of information sharing has led to a great transformation in enterprises. The main objective of the research in this context is to understand the level of the use of information technologies by private companies in Turkey, to analyze whether the internet applications and computer systems are used by HR departments or not, to determine whether digital technology has an impact on HR processes in enterprises, to determine the problems related to the topic, and to suggest solutions to these problems.

In this context, it is possible to determine the sub-objectives related to the research as follows:

1. To determine the use of information technologies (computer use, the internet usage, information systems etc.) by institutions and organizations,

2. To determine the purpose of using the technology systems by institutions and organizations,
3. To determine the frequency in which institutions and organizations use technology systems,
4. To determine the responsibilities of HR departments and the processes of these responsibilities for institutions and organizations,
5. To learn whether HR departments of institutions and organizations use technology for business processes,
6. To determine the advantages and disadvantages of institutions and organizations before and after the use of technology in human resources processes and,
7. To determine the advantages and disadvantages of the applications of Electronic Human Resources Management.

4.2. Research Hypotheses

Research Question 1: Does the use of basic information technologies, such as the internet and computers, provide companies with a more efficient, faster, location- and time-independent environment?

Research Question 2: Does incorporating information technology in business processes change the way organizations and institutions work and manage business?

Research Question 3: Does the use of information technologies in organizations and institutions affect the management and workflow of Human Resources departments and the brand value of organizations?

4.3 Research Assumptions

In this research, which is about measuring the effect of digital transformation on HR processes of companies, the participants are a sample representing the target group and have responded to the interview questions objectively and accurately.

4.3.1 Methodology in Research: In-Depth Interviewing

In this study - which is about measuring the effect of digital transformation on HR processes - the in-depth interview technique was selected from among the options of research methods. Within the scope of the research, firstly, the focus group study method was attempted, but most of the participants were concerned about their names as they were sector leaders. In addition, it was determined that the participants could not give information about company experiences as impartial and direct to the sector employees with the focus group study method. Some of the participants did not want to be recorded with audio to ensure their anonymity was kept. For this reason, the in-depth interview method was chosen as the method of research for this study. In-depth interviews create an environment where the participants won't feel as if they are in a competitive environment and instead feel safe and secure. This research includes senior executives with decision-making powers from HR departments within the private sector in Turkey. In this study, semi-structured in-depth interviews were conducted with 15 participants working in the technology, advertising, retail, software, education, communication, finance, e-commerce, and gaming sectors. During the interviews, some of the participants were able to speak freely. Interviews took place for an average of 60 minutes in an open-ended, experience-based, and interpretative environment in which the participants expressed themselves easily. In some of the interviews, the participants experienced a problem

of trust while giving information about their companies and their experiences. They were concerned that they would have a negative impact on their careers while sharing their comments and experiences and therefore did not provide many details.

4.2.1. Semi-structured interview

The most prominent part of this interview is that the questions to be asked in the interview were determined in advance, which allowed the researcher to evaluate the answers (Yıldırım & Şimşek, 1999).

4.2.2. Ethics

It is the duty of the researcher to provide reliable and valid scientific information. Scientific research should be unbiased and in accordance with ethical values (Ülman, 1996, 51). It is a criterion that evaluates the values on which human relations are based as right, wrong, good, and bad (İnan, 1996).

4.2.3. Results

This section includes the findings of the in-depth interviews conducted within the scope of the research. As part of the semi-structured interviews, an average of 60-minute interviews were conducted with 15 people working in the HR department of different sectors. Sixteen open-ended questions were posed to the participants. In this context, certain topics were discussed such as creating speed and time advantage in HR processes, increasing productivity in business processes, providing qualified recruitment, decreasing costs, effective communication among people, as well as obtaining secure and accessible data.

4.2.4. The Speed and Time Factors: Technology Saves Human

Resources Processes Speed and Time

In the semi-structured interview, the participants were asked the questions such as “What are the pre- and post-advantages of the technology you use as an HR department for your organization?”, “Do you use technology to ensure internal communication within your organization?” and “Why do you use technology as an HR departments?”. 90% of the respondents stated the advantage of speed in terms of using technology. The participants stated that the technology accelerates HR operations, especially in recruitment, onboarding, career management, and performance management processes. It was stated in all interviews that technology is used in internal communication, and these technological tools save time, and speed. All participants stated that they use technology to speed up, save time and reduce costs. HR executives, especially those working in the technology sector, were reluctant to give figures and details while sharing their experiences. One of the reasons speed is critical is that we are in the digital age and that candidates are dispensable for companies and vice versa. Nowadays, the use of digital tools such as LinkedIn, the internet, computers, and mobile phones have increased, allowing companies and candidates to reach their target faster. In addition, interviews with candidates are concluded in a shorter period for both employees and companies. The ability to communicate independent of a location provides flexibility.

Employees at international companies were concerned about the confidentiality of their information. They wanted to meet with the legal departments and get confirmation before and after the meeting. They wanted to conceal the names of their companies and themselves, fearing that the information they revealed could be used by their competitors.

"We were the lucky generation because we didn't coincide with it before. Technology entered our lives in 1999 when we started to work. The intranet, social media, and online communication are new to us. In the first place, it increased the speed and efficiency, provided the correct protection and storage of the data, and effective analyzes were done." (Cavidan, D, M, 2019)

"Technology is a reality, and we are looking into how we can benefit from it. Just with the arrival of digital, the print media came to an end. Which meant that the line of business at our company was shut down. Although the need for people to get news quickly caused us losses in this part of our business, there were also benefits. This shift led us to change our strategy, and we switched to digital communications to catch up to the speed that is expected by the consumer. If we hadn't kept up with this change, we would have lost our brand and target audience. We had to use this technology to reach the next-generation candidate during the recruitment process. New generation candidates want to go through a faster process. They want us to communicate through technology and take their time. Their experience in the interview process provides them with a positive or negative opinion about the brand and culture. As the speed of access to information also increases, we can access information about the candidate in only a few minutes." (Yasemin, D, M, 2019)

"For brands in the retail sector, speed equals money. This fact is felt in every department of the company. As we are one of the leading companies in the sector, we have several stores in many countries. In addition to that, the company's recruitment for general directorate is done frequently. However, since many stores are opened

every month and turn-over is very high in the sector, recruitment is the most important step. We perform 1,000 new recruitments each month. If we consider that these people are in different countries, sending all of them to our headquarters and providing them with training would waste time for us. We use technology a lot during the onboarding process. It's quite important to take advantage of technology and save time during the recruitment and onboarding process, which is the most challenging part for us. We do brand management and offer employment for new graduates. If we communicate slowly to the new generation without using technology, we will lose loyalty to the brand. Because we believe in this, we published the first digital job postings in Turkey. While we received an average of 1,000 applications from print media, we received 10,000 applications with the announcement we did digitally. From the orientation side, we've gained speed and efficiency by using Skype for all our branches in Turkey and Europe. Within two weeks, we complete the orientation process for a newly hired employee.” (Oğuz, D, M, 2019)

"We had an intranet website inside our company; when you entered the app, it was asking how you are, whether or not you're satisfied. If someone said they were unhappy, it provided choices and allowed employees working at the company to rate their level of satisfaction or dissatisfaction. In this way, we were able to reach out to unhappy employees very quickly and make them happy. Since the happiness of the employees directly affects the customers and his/her environment, taking action quickly was one of the most important issues. Considering that there were 11,000 employees in 400 of our stores, using technology to communicate gave us a speed

advantage. Without technology, it would not be possible to give and receive information from so many people at the same rate." (Oğuz, D, M, 2019)

"Data is very, very important to us. It will become even more important in the coming periods. Data directly affects our strategy and growth target. We have to report this data, as well as to measure, collect, evaluate, analyze and interpret what we contribute. Nothing works until the data is interpreted. Collecting and interpreting all this data is meaningless unless it is fast. We have to collect data instantly and measure and use it as soon as possible. This speed directly affects our workflow and brand strategy. To provide the smallest example, we are now able to achieve the results we want with a single button, whereas we were wasting time with the technology we used in planning our budget. We can say that technology has given us speed most of the time." (Neslihan, D, M, 2019)

"Since we are a technology company, providing a fast and technological experience to our target audience is the biggest factor in managing their perceptions of the brand. We have special tools within the company, and we use these technologies to ensure fast communication and our workflow. In the past, when we were interviewing candidates, we were wasting a lot of our and the candidate's time and reaching a result more slowly. It's not possible for me to go to India and Brazil on the same day. However, on such a day, I use online communication tools to gain time, cost and speed." (Funda, D, M, 2019)

"We began a paper reduction project. We used to take resumes and take notes on these pieces of papers. It was challenging to keep these notes after the interview. It

took a lot of time to upload a person's resume to another location and import notes into a different system. It was essential to speed up this process for the next interview. Sometimes, as this process did not catch up to the next interview, we forwarded our handout notes to the interviewee, which caused chaos. We have our own system like SAP, and we have a communication tool called Peopleize. Now all interviewees can access the information they want at any time. Applicants can view digitally what phase of the process they are in and what awaits them in the next phase. We also advertise digitally. Since we are a gaming company, we hide our ads in digital games, and this gives us the image of an innovative company. It's a creative and interesting experience for applicants and non-applicants. (Cansu, D, M, 2019)

"Although we don't 100% use the technology, we feel its effect very much. There used to be direct communication. Although it is seen as something that reduces human relationships, the speed advantage of technology makes everyone happy. The young generation, in particular, communicates over the phone, even when sitting next to each other. It costs us both time and our image to call these candidates to the office and take up their time. We can access information quickly. Sometimes we look at the candidates' social media accounts. Instead of wasting time asking for information they did not give us, we can find the answer to our question on LinkedIn accounts. While in the past we published ads on paper, we can now post announcements all over the world at the same time. " (Kaan, D, M, 2019)

"There is a mobile application that we use within the company. We communicate through this application. Due to the time difference of our colleagues in different

countries, we can reach them quickly even if their computers are not turned on, and even if they are not at home. Our computer is not always accessible, we do not carry office phones with us, but thanks to our phones and this mobile application, we can communicate very quickly. This speed can be important for us, sometimes in managing a crisis and sometimes in making use of an opportunity.” (Elif, D, M, 2019)

4.2.5. Cost Factor: Technology Reduces the Costs of Human Resources

Processes

As part of the semi-structured interviews, participants were asked questions such as “Do you use technology as an HR department for your organization in the recruitment processes? ”, “ Do you use technology as an HR department for your organization’s onboarding processes?” and “How do you archive your data as an HR department?”. 90% of the respondents answered “yes” to the first two questions. All participants archive their corporate data in the cloud system, but they keep them for a certain period due to legal reasons in Turkey. While giving examples of the cost advantages, the participants asked that certain parts not be recorded. HR executives working in the technology sector were reluctant to provide the names of the programs they used.

One of the most prominent examples of this is that technology reduces the number of employees in the Human Resources department. When all interviews were conducted face-to-face, there was much more of a need for an interviewer. However, now there is a decrease in the number of these interviewers. Similar to the advantages of technology, there is a disadvantage to Human Resources employees in terms of cost. For instance, the workload of employees has increased and working

hours are not clearly defined due to remote work, ie, homeoffice. Since there is no time for entry and exit times and because it can be accessed remotely through cell phones, communication can continue with smartphones - including on the weekends.

"For example, for a dealer's meeting, our employees in different cities can connect over a frequency, and we can avoid the cost of bringing everyone together."

(Yasemin, D, M, 2019)

"One person from my team lives in Ankara, the other in Izmir, and the others in the Netherlands and Germany. Technology allows us to work together. We can serve our customers from all over the world. We don't respond positively when our customers want to meet face-to-face, because we don't want to invest the time and money in doing so." (Oğuz, D, M, 2019)

"By using e-learning in educational applications, we have avoided the cost of hiring trainers. In addition, since our employees in different locations are connected and received training from their computers on their own time, we did not pay the transportation and accommodation costs of the people. Our employees can choose their most productive days and hours since they can receive their training until a specified date, which directly affects their performance and interest in the training."

(Neslihan, D, M, 2019)

"With the homeoffice application, we have provided a great advantage to the expenses of the employees at the company and abroad in different locations of our company, although it is not used very much at present." (Funda, D, M, 2019)

“In an organization of 5,500 people, we wouldn't be able to provide even the simplest information quickly and for free without the support of technology. We believe in technology a lot, but of course, you need to make an investment first and allocate a budget. The return is greater.” (Sezen, D, M, 2019)

“Knowing which candidates, where and how to find them gives us a cost advantage. The advertisements we used to post were like mailing letters to the middle of the city; now, we can directly reach the right person on a low budget by specifying certain things such as quality-quantity concepts, age, gender and education.” (Ayse, D, M, 2019)

“In the past, we used to organize our orientation training and activities every six months. Sometimes, employees already had an orientation. This arrangement that we had in order to cut costs would be inefficient. Now we complete this orientation online every month, so we can increase productivity by reducing costs.” (Ayça, D, M, 2019)

“There are ten training sessions our employees need to complete as soon as they start. They can do this training online without coming to the office. Thus, the employee can complete their training even before they begin working.”(Vildan, D, M, 2019)

4.2.6. Productivity Factor: Technology has made Human Resources Processes Efficient.

In the semi-structured interviews, the participants were asked “Which information technologies do you use as an HR department for your organization?” and “What are the advantages of the technology you use as an HR department for your organization before and after?” Most of the participants stated that they use technological communication tools, cloud technologies, the intranet, social media, internet connection networks, and hardware tools such as laptops. All participants stated that they started using technology to speed up operations and reduce costs, but after using it, they gained efficiency for several reasons.

“When we used SAP, we had various databases. People's information was in another place, performance information was in another place, and health information was in another place. Not having all the information in one place was a waste of time. Since there was no central control that everyone corrected by hand, the reliability and quality of the data also decreased. The information needed to be updated separately - from the health card of an employee who changed the address to their resume. Since not everyone has access to someone's past experience, the information was scattered and difficult to find during the promotion process, and we got tired. With new technology, we created a system where all data is collected in a central location. This data we kept in the cloud could be instantly updated and accessible to everyone. We also created a system called EDF (Electronic Document Flow). I have purchased technology that is adding to this system. In the past, there was a hierarchical process of obtaining and signing for permission. When a person wanted to take leave, he or she had to fill out a legally signed form and have someone sign it. That employee is now completing the personal consent form online. That form can go to the manager

in a second. Then it goes to Human Resources. We got rid of the form that passed between hands and made it electronic and automatic. Since updates are made regularly and integration is done every evening, everyone can see how many days they have left just by looking at the online system. Calculations and records have become easy and accessible. I see human resources management as information management. You fail when you cannot manage information and data. You'll have a negative experience inside and outside the company. It's the cycle speed and efficiency cycle. Fast and efficient wins out. Fifteen years ago, we were keeping permission forms in Excel and providing information to individuals one by one. When we were providing training, we asked people one by one whether or not they wanted it, and they took this written permission from the manager and brought it to us. We lost time, money and speed. Now when there is training, he or she can register with a single button, and the manager sees it. They can even request education anonymously with the click of a button." (Yasemin, D, M, 2019)

"Everyone in our company had 9 TV screens in front of them, including the person working at reception. We turned this sectoral opportunity into an opportunity and programmed our trainings to our own frequency and carried them out as people were watching the TV screens. Thus, while having lunch or working, people could participate in the training and meetings, independently from the venue." (Yasemin, D, M, 2019)

"When we look at a variety of sources, such as the Deloitte World Economic Forum, the most interest in research that has been done at the CEO level in recent times has been employee analytics. There is so much data about the employees in companies that we need to conclude something from this data. For example, we analyzed the

demographic characteristics of a company and prepared an annual activity plan that would make all the employees happy. We have learned that 80% of our employees have children, and 60% have children within the 0-6 age range. We've created the idea of opening a kindergarten at the company. We decided to celebrate the April 23rd holiday [National Sovereignty and Children's Day] at the company. We obtain successful results when we take steps based on the information and data. Following these steps taken, employee loyalty increased. We have 20,000 employees, and when we look at these employees as a family, we realize that we multiply by a min of three when we add their parents and a close friend. When we do this, we have a word-of-mouth impact from more than 20,000, which contributes directly to the brand. We are serving the brand's image.” (Yasemin, D, M, 2019)

"We have a scorecard system that we evaluate from the trainings received by our employees to the projects they have achieved and promoted. Conducting performance management on online platforms gives employees a career management experience in which they receive fair and fast results. We are the first brand in Turkey to make technological applications within this scope. At PERYÖN, we received awards in this field for three years." (Oğuz, D, M, 2019)

"We created a system similar to a hotline. Employees were able to constantly correspond with the manager that we called the happiness manager. For example, if someone working in Maraş or Tbilisi had children, he or she was able to share their own news. We have a Mediterranean meeting once a month, and all users from around the world could connect online to share their troubles with the happiness

manager. We were responding to most of the problems and trying to resolve them.

The fact that there is someone in the company who listens and thinks about them and being able to communicate directly with these people has increased the loyalty of our employees." (Oğuz, D, M, 2019)

"Five out of 10 candidates invited to face-to-face job interviews could cancel last minute. When we look into the reason for these cancellations, we see that they don't want to devote time and money to it. It's something we expect from a person who is in the process of job hunting and physically going to at least 5-10 companies. We brought our interviews to online platforms. After this change, the number of people who canceled their meetings decreased by 90%. (Oğuz, D, M, 2019)

"In the past, we used to publish our ads in printed publications. We weren't able to analyze things like how much of our target audience saw our advertisement or how much they were interested, the demographic distribution and the channel of those interested. Now we are able to place our ads on LinkedIn and directly address our target audience and analyze the results in full detail. Technology has enabled us to streamline these processes and results. We are also able to communicate directly with our candidates via messages and comments received through our social media accounts." (Neslihan, D, M, 2019)

"When we conduct our interviews physically, our disabled candidates might have difficulty in participating. Technology provides equal opportunities in this sense and

enables us to communicate more efficiently with our disabled candidates." (Neslihan, D, M, 2019)

"In the past, while we did interviews over conference, we are now able to use video calling. It provides more intimate, reliable, and direct communication with these candidates." (Funda, D, M, 2019)

"Technology has certainly increased collaboration between employees and has helped to get things done faster and more accurately. Cooperation and communication between teams increased so that we could see the results of the work more easily (Funda, D, M, 2019)

"As we are an international company, we also have diversity targets at our local branches. The fact that all of the people we hire are from our location reduces our performance. We can only reach people from various countries, genders and talents through digital channels." (Cansu, D, M, 2019)

"We have been able to make it where can reach the person with the desired qualifications in a few minutes with careful filtering of the incoming thousands of applications." (Banu, D, M, 2019)

"With the development of technology within human resources processes, the number of people working in the department has decreased. We entered a new era in which

computers carry out operational duties with personnel costs. I see that this change has just begun, and fewer and fewer people will have jobs." (Banu, D, M, 2019)

"We've established an online academy so our employees can receive their annual training at any time through the tablets we provide them." (Kaan, D, M, 2019)

"By using artificial intelligence in interviews and performance evaluations, we achieve fairer and more accurate results." (Ongun, D, M, 2019)

"Although we are a technology company, we prefer not to use technology in communication because of the Far Eastern culture. For example, it's not possible for us to work at homeoffice, to communicate with our colleagues via mobile apps on our mobile phones and to conduct interviews from online apps. We expect the candidate to come to our office closest to the candidate's location, even if he or she will interview someone at our headquarters, for an interview and to establish a connection. (Elif, D, M, 2019)

4.2.7. Communication Factor: Technological Communication Tools Have a Direct Positive and Negative Effect on Communication Between People.

In the semi-structured interviews, the participants were asked the questions "What are the advantages and disadvantages of the technology you use as an HR department for your organization before and after?". 40% of the participants stated that technology can harm brand communication, while 50% stated that it provides an advantage in internal communication. There have also been the people who think

that the technology tools that accelerate internal communication are damaging them, as they drive people away from face-to-face communication. The participants stated that technological communication tools, which are obstacles to intimacy in internal communication, may cause mutual bias and stress in people. Particularly in local companies, there were people who found that online communication caused misunderstanding and was linked to the country's culture. Employees at international companies did not have such a concern.

“We've established a system similar to LinkedIn within the company. In this system, people could share their interests with their academic and professional background. This allowed us to get to know each other better and communicate more intimately within the company. For example, I was looking for a teacher for my son for guitar lessons, and I learned from this system that one of our employees gave guitar lessons in his spare time, and that's how we had a relationship. In addition to this, I'm a career coach. An employee who saw this in this system offered me to coach her daughter for university and in selecting a department to study in. When someone leaves the company, the account here closes, and when a new person is brought on, a new account is opened. Everyone can contact this person with their information and welcome them and find common ground for a conversation. We also had news of promotions, birthdays, and anyone who won awards to the screens within the company, so that they could see themselves on the screens all day and were celebrated by everyone. We share not only work and stress but also success and special occasions.” (Yasemin, D, M, 2019)

“Since our company has thousands of branches in many countries, we receive a significant number of job applications. It is one of our priorities to provide positive

or negative feedback to these applicants and to not leave our target audience uncontacted. We are committed to providing an automatic communication system to our target audience with the technological tools we use. We have even received international awards with the integrations we have made in this way. The applicants had direct access to the interviewees. With intelligent and 24/7 systems, artificial intelligence can answer many questions asked by the users. This gives us a brand image that is always accessible and sincere in a way that allows us to be independent of time and space. We gain the trust of our candidates and employees through our transparent communication.” (Oğuz, D, M, 2019)

“Technology seems to be an obstacle to genuine communication, but if you act wisely, it's not. Through our internal system, we were able to express people's emotions through symbols and often take steps to make people with negative emotions happy. In this way, we moved the human dimension to technology. We have established a unit where they can communicate, and I think that we have captured this human dimension thanks to this unit. Businesses are set up for profit, and when figures are mentioned, this process is meaningful. Technology provides us with numbers. We made measurements by associating this happiness with performance. We found that a one-point increase in happiness leads to a 32% performance increase.” (Oğuz, D, M, 2019)

"We've created an internal thank-you application. Every employee can thank someone else for their support through the mobile app, write comments and earn rewards with the points they receive. We have transformed technology into an

advantage in terms of communication and increased the sincerity and appreciation of people." (Neslihan, D, M, 2019)

"In the past, listening to tape recordings made consumers unhappy, but now it doesn't bother people to communicate with artificial intelligence. They love whoever provides them with the most accurate and fast response. They look at the form of communication, not where it comes from. " (Ayse, D, M, 2019)

"In fact, technology is a factor that reduces direct communication and prevents proper communication. I miss the old times because it reduces human relationships. Sometimes writing an upper-case word in an email subject or not adding a signature at the end of an email can lead to big misunderstandings." (Kaan, D, M, 2019)

"Although technology allows us to transmit concrete data, it doesn't allow us to convey the human dimension of the job, and this is a factor that is as important as recruitment, performance management and career evaluation." (Ayça, D, M, 2019)

"We're providing friend support by giving new hires the name of two friends they can contact. One is from outside the city or country and transfers information about the location, and the other is in the same location. Thus, we can close the gap in the lack of communication brought about by technology." (Ongun, D, M, 2019)

"We have more than 35,000 employees in 50 countries, and it would be impossible for me to contact them directly. Nevertheless, technology provides us with the opportunity to help a non-governmental organization on behalf of all our employees at the beginning of the year and forward their special certificates by email. We use

online education platforms that offer education in 18 languages. These programs give us the advantage of cost, speed and communication.” (Gökhan, D, M, 2019)

“Platforms like e-learning have a negative impact on people's communication. Employees want to ask questions or see their managers or trainers. I don't find it right for the employee to communicate with the computer as soon as they begin work, but considering the speed, cost and time advantage, this is the way we have to go.”

(Vildan, D, M, 2019)

4.2.8. Technology Makes Company Data Safe and Efficient.

In the semi-structured interviews, the participants were asked the questions “How do you archive the data that you have as an HR department for your organization?”.

Companies archive their data on the cloud in Turkey due to legal issues. In addition, data must be archived in print for a certain period. 90% of the participants stated that they use the cloud technology. Technology companies use their own cloud technologies or the datacenterx, while others outsource it. Regulatory institutions such as in the bank and public sectors archive their data in their local datacenters. Most of the participant said that it is not possible to save the data safely without the cloud system. In the previous years, this process was done manually, and it caused risky and irreversible results for the company.

"Because of the sector we are in, our data is very valuable. Because we work with the biggest brands in Turkey, we need to keep up-to-date and confidential. We work with people who are copyrighted, as well as protected by press law and labor law.

We can archive this sensitive and detailed data quickly and in the latest way due to technology. Because we use cloud systems, our data was stored in three different data centers on three continents. The security of our data was ensured through advanced measures." (Yasemin, D, M, 2019)

"Technology creates an opportunity to sidestep incorrect information. In the past, we used to manually enter data, which would lead to operational errors. Automating this process as much as possible leads to the reduction of operational errors and the efficiency of the data." (Yasemin, D, M, 2019)

"It is vital to protect and analyze the data, to keep the data the same - even if people change - and to carry out the system. Sustainability can be achieved through secure data, and efficiency is achieved in this way. We have become safer since we automate data and keep it in different technologies." (Cansu, D, M, 2019)

"We use artificial intelligence for our data. However, there is no such thing as 100% accurate information, but we have made the margin of error closer to zero and safer than the human factor. " (Banu, D, M, 2019)

CONCLUSION

It cannot be denied that technology has an impact on HR processes as it has in many business areas. Technology has affected and changed HR processes. The change brought about by technology has created cost advantages in the HR processes of companies. It is effective in accelerating the workflow, and, thus, saving time. It has enabled the recruitment of qualified people through communication aimed at a more accurate and direct target audience. In addition, technology supports the management of information and data, which is one of the most important tasks of HR departments. As a result of this piece of research, it has been seen that the companies that obtain, filter, and analyze their data with the support of technology are taking the correct steps. I wanted there to be diversity in the participants that I chose. Therefore, I included different participants from public institutions, international companies, corporate and non-corporate companies. I also paid attention to the fact that the scales of the companies were different, and the number of employees varied between 2 and 200,000 people. I paid attention to the fact that my participants were young and middle-aged men and woman. Finally, in the sectoral sense, the reason I chose different sectors such as gaming, retail, construction, education, and health was to create diversity. In this way, I observed that human resources vary from country to country, sector to sector, and company structure. The emotional state of the participants also varied. Participants discussed that technology is mostly used by HR departments in technology companies. This study has shed light on the fact that institutions and organizations are subject to the regulations in the banking and the public sectors for instance and are biased against the use of technology. While technology can eliminate the human factor in communication and cause communication accidents, it can also increase employee communication, loyalty,

sincerity, and satisfaction through different and innovative practices. This piece of research also shows that technology is mostly used in recruitment, orientation, performance management, data collection, processing, and storage. Furthermore, the interviews showed that organizations with many employees started using technology earlier and that technology creates a great cost advantage, particularly for companies that have offices in different locations. The collected data confirmed the following hypotheses stated earlier in this thesis.

Happiness Manager: During the research, it was observed that a position called the happiness manager was established at a company, and this area became a department over time. People could evaluate each other online regarding their colleagues and their work. As a result of these anonymous assessments, high performance and collaborative individuals were noted. The best thing about it was that it was a fair and impartial assessment. Also, the happiness manager, who could be reached at any time, was attempting to solve complaints anonymously. For example, if you thought your working hours had been extended and if you were to provide the name of the leader of the department, then the management supervises how he or she manages his or her employees and provides a clear schedule of working hours. Technology that allows for such new business areas and titles also enables companies to make their employees happier and provide fair performance evaluations.

Technology provides equality: People with physical disabilities had difficulty finding jobs before technology. There are several reasons for this. Individuals with disabilities experienced physical difficulties participating in the interviews, and physically searching for a job was also challenging. They can now search for and

apply for jobs in a few minutes at their fingertips using digital sources. They can also conduct interviews online. In this sense, the technology that provides equality also provides comfort not only during the job search and recruitment process but also after recruitment. For example, a disabled person working in a company that uses cloud software can continue to work remotely without leaving their home. Again, people working as freelancers can continue working without leaving their home. The companies that lagged behind measuring the number of men and women in the past have now started to place importance in diversity and equality among their employees as they are now required to provide figures in digital fields, and they are afraid to lose prestige in the future.

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APPENDIX A

In-Depth Interview Questions

1. Can you share the job description of the department you work for?
2. Do you use Electronic Human Resources management in HR processes?
3. Do you use technology as an HR department for your organization in recruitment processes? In what way?
4. Do you use technology for business processes as an HR department for your organization?
5. Do you use technology for onboarding processes as an HR department for your organization? In what way?
6. Do you use technology to ensure internal communication within your organization? What technologies do you use?
7. How do you archive your data as an HR department for your organization?
8. How long have you been using technology as an HR department for your organization?
9. How often do you use technology as an HR department for your organization?
10. What are the disadvantages of the technology you use as an HR department for your organization before and after?
11. What are the pre- and post-advantages of the technology you use as an HR department for your organization?
12. What are the responsibilities of the HR department for your organization?
13. Which information technologies do you use as an HR department for your organization?
14. What is your purpose as an HR department in using technology?

15. What technological infrastructure do you have as an HR department for your organization?

16. Where and in which position do you work?



APPENDIX B

INTERVIEW LIST

Cavidan: Cavidan is a Senior HR Director for Turkey and Emerging Markets North in the retail sector. She has worked as a head of HR in the retail, technology, telecommunications, holding and consulting sectors in the past. She is female and about 40 years old. She graduated from Middle East and Technical University.

Oğuz: Oğuz is founder of a headhunter & HR consultant firm. He has 15 years of experience in HR departments with five different companies. He is male and about 40 years old.

Yasemin: Yasemin is female and more than 50 years old. She is an engineer and has 20 years of experience in HR. She is Executive Vice President of the HR and Support of the biggest holding in Turkey. She has worked as an HR manager in different holdings in her past. She completed her undergraduate studies at Boğaziçi University and received her Master's from Istanbul Technical University.

Ayşe: Ayşe is female and more than 40 years old. She lives in Montenegro but is working for the Turkey market as an HR consultant. She became a senior managing partner after 10 years of HR experience. She was a HR manager of a bank, consultant firm, holding, university, technology company, and the World Bank, among others.

Cansu: Cansu is an HR Manager in a game company. She is almost 30 years old and has experience in holding and gaming companies. She studied economy and completed her Master's from Istanbul Bilgi University and Boğaziçi University.

Banu: Banu is almost 45 years old and female. She has experience as an HR Manager in different sectors such as finance, automotive, advertising, e-commerce, and health. She graduated from Marmara University and received her Master's in Psychology from Istanbul Ticaret University. Now, she is an HR Manager of technology company.

Kaan: Kaan is Chief of the HR department of the company in the transportation sector. He has worked as a director of HR departments in various sectors such as technology, advertising, software, communication, e-commerce. He is male and 50 years old.

Ayça: Ayça is female and 38 years old. She is Deputy Manager HR of a holding company. She has spent her professional life working in international companies such as Philip Morris International, Coco Cola Company, E&Y, IBM, and P&G.

Ongun: Ongun is male and almost 40 years old. He had experience in a holding company, a technology firm, a bank and telecommunication company in the HR departments. Now, he is an HR Project Manager of a holding company. He also has worked as a Big Data Analyst at a bank.

Elif: Elif is female and 27 years old. She's completed five HR internships in different sectors such as technology, retail, and NGO. Now, she is the HR Specialist of a technology company. Altogether, she has 3.5 years of experience.

Gökhan: Gökhan is male and 45 years old. Most of his experience has been in the retail sector. Now, he is the Retail HR Director of Turkey, Europe, MENA, Russia regions. He has more than 20 years of experience in HR. He graduated from Hacettepe University.

Vildan: Vildan is the Manager of the HR Academy and Talent and Development of a holding company. Most of her experience has been focused on the training and employee development part of HR. She graduated from Marmara University.

Neslihan: Neslihan is female and 40 years old. She is head of HR at the bank. She is also working as a lecturer at a university. She graduated from Hacettepe University in Psychology and received her MBA from Istanbul University.

Funda: Funda is 30 years old and female. She is an HR professional with an BA degree focused in English Language & Literature (in Western Languages & Literatures Department) from Boğaziçi University. Additionally, she is a certified motivation coach and has a certification in Business English from Boğaziçi University. She is the Global Mobility Country Lead of a technology company.

Sezen: Sezen is a Senior HR Manager of an international holding. She has previously worked with a different brand within the holding. All her experience is working in international companies. She did her undergraduate degree in Sociology at Istanbul University.

APPENDIX C

RESUME

