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INVESTIGATION OF THE IMPACT OF HUMAN RESOURCES TRAINING ON INNOVATIVENESS: CASE OF BURSA INDUSTRY

SAMET FINDIK

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ACCEPTANCE AND APPROVAL

This study titled "**Investigation of the Impact of Human Resources Training on Innovativeness: Case of Bursa Industry,"** prepared by **Samet FINDIK,** has successfully passed the thesis defense organized on ../../2021 and accepted as the doctoral thesis by our jury.

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ÖZ

İNSAN KAYNAKLARI EĞİTİMİNİN YENİLİKÇİLİĞE ETKİSİNİN ARAŞTIRILMASI: BURSA SANAYİ ÖRNEĞİ

Günümüz işletmelerinde uygulanan insan kaynakları eğitimlerinin inovasyon üzerinde etkileri görülmektedir. Bu bağlamda birbirlerini besleyen süreçlerden bahsedilebilir. İnsan kaynakları eğitiminin yenilikçiliğe etkisinin olumlu etkiye neden olmakta, inovasyon ise gerek yöneticilere gerekse de çalışanlara verilen insan kaynakları eğitimleri ile işletmelerin insan kaynaklarının eğitim düzeyinin yükselmesinden destek bulmaktadır.

Bu araştırmanın temel amacı işletmelerde kullanılan insan kaynakları eğitimlerinin inovasyon üzerinde etkisini tespit etmektir. Bu etkiyle ilgili literatürde çeşitli araştırmalara rastlanmakla beraber insan kaynakları eğitimlerinin inovasyon üzerinde etkisinin belirlenmesi konusunda yapılan araştırma sayısı sınırlıdır. Bu araştırma ile birlikte literatürde konu hakkındaki boşluğun bir derece doldurulmasına katkı sağlanması amaçlanmıştır.

Bu çalışma Bursa Ticaret ve Sanayi Odasına kayıtlı bulunan büyük ölçekli, Makine ve Tekstil alanında faaliyet gösteren işletmelerde 215 çalışana ve yöneticiye anket uygulaması yapılmasıyla gerçekleştirilmiştir. Bilimsel çalışmalara uygun olarak araştırma sonucunda elde edilen veriler SPSS 23.0 paket programında güvenilirlik analizi, ortalama, regresyon ve korelasyon analiz sonuçlarına göre değerlendirilmiştir. Yapılan analizler sonucunda insan kaynaklarının eğitim alma sürelerine göre inovasyon üzerine etkisi olduğu sonucuna ulaşılarak konuyla ilgili öneriler yapılmıştır.

Anahtar Kelimeler: İnsan kaynakları, İnsan kaynakları eğitimi, İnovasyon, Bursa

ABSTRACT

INVESTIGATION OF THE EFFECT OF HUMAN RESOURCES TRAINING ON INNOVATIVENESS: CASE OF BURSA INDUSTRY

Human resources training applied in today's businesses is seen to have an impact on innovativeness. In this context, it is possible to mention processes that feed each other. The effect of human resources training on innovativeness is a positive one, and innovation is supported by human resources training provided to both managers and employees and the increase in the level of human resources training of enterprises.

This research aims to determine the effect of human resources training used in businesses on innovativeness. Although there are various studies in the literature regarding this effect, the number of studies on determining the effect of human resources training on innovativeness is limited. This research aims to fill the gap on the subject in the literature to a certain degree.

This study was carried out by conducting a questionnaire with 215 employees and managers in large-scale enterprises operating in the field of Machinery and Textile, which are registered in the Bursa Chamber of Commerce and Industry. Following scientific studies, the data obtained were evaluated according to the results of reliability analysis, mean, regression, and correlation analysis in the SPSS 23.0 software pack. As a result of the study, it was concluded that human resources affect innovation according to the duration of the training, and suggestions were made on the subject.

Keywords: Human resources, Human resources training, Innovation, Bursa

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ABBREVIATIONS

et al. : and others

etc. : and the rest

HRM : Human Resources Management

OECD : Organization for Economic Cooperation and Development

p. : page

R&D : Research and Development

USA : United States of America

CHAPTER 1

INTRODUCTION

Training and social innovations are considered the main factors for economic development and improved social welfare in our globalizing world. Training is accepted as the main factor in creating innovation for economic and social development (Romer 1993). Cultural differences and differences in the knowledge and skills of employees demonstrated that they could develop new ideas and new models (Niebuhr 2010). Innovation is a process that can happen in various products in numerous fields. Many countries have transformed the innovation process into economic and social benefits by successfully managing it. Changes in the world have brought the need for creative individuals. These developments have demonstrated the importance of training.

Every year, 120 to 141 countries on earth use the global innovation index tool to understand and measure innovation. These countries represent 95,1% of the world population (Taş, 2017). Measurements are being conducted to identify the level of innovation and entrepreneurship of training institutes in line with stakeholders' expectations and improve the system. For this purpose, the Entrepreneurial and Innovative Universities Index created by TÜBİTAK has been used in Turkey since 2012 (Tekin et al., 2018).

Today, world countries have adopted the view that innovation is a must for continuous development (European Year of Creativity and Innovation, 2009).

The process of globalization on international competition conditions made businesses required to be effective and productive. As a result of these

developments, companies started to pay attention to human resources training to search for new resources, markets, products, and processes. Businesses that implement human resources, business performance, and leadership in a coordinated fashion and keep possession of trained human resources achieve success within the framework of global competition conditions. We have started to hear new concepts such as artificial intelligence and dark factories. These advancements have allowed enterprises to create competition strategies on human resources.

In today's world, science is in constant development has added great importance to training and innovation. These developments in the scientific field made countries have strong economies by improving their welfare levels. Therefore, they had to engage in practices, make laws, and generate policies to create innovation. For this reason, it is essential to study the impact of human resources training on innovativeness.

In the 21st century, information and innovation became the two most significant factors in economic power, and studies in this field gained momentum. Developments in science gave the technology a superior speed. Countries' financial conditions and welfare levels vary depending on whether they provide crucial training and innovation. The fact that science and innovation became components of economic power rapidly increased the number of scientific studies in the field. All these advancements point to the importance of human resources training and innovation works.

1.1. Problem Status

Businesses can acquire a competitive advantage through innovative training. The attitude of managers supports creating innovation. Managers must identify necessary training programs. Moreover, it can be seen that it is also essential to encourage and support employees for innovation (Montes et al., 2003). Human Resources practices can improve innovation skills only when applied as a whole (Wikhamn, 2019). Germany, a country that generated many global brands, has adopted a management approach based on planning, efficiency, innovation, expertise, and technical competencies. In addition to this, it has acquired multicultural human resources by allowing immigrants from various

countries. These resources have allowed it to create innovative world brands (Tunç & Parıltı, 2020).

Models that identify the innovation process as a process without any problem make a mistake in identifying the practical factors in businesses. Enterprises that fail to consider that innovation is a complex and somewhat irregular process that depends on many differentiating factors have problems. Measuring the impact of human resources training on innovativeness constitutes a problem too. It has become a requirement to excel in Economic and Market literacy (Kline & Rosenberg, 2009). All steps taken for innovation affect the world and lead to many issues, including global competition. It should be noted that the most important source of science and innovation is trained human force.

Individuals might tend to resist change and only want to maintain their current positions. Society might not support individuals who opt for a change. Discriminating against innovative individuals who have the same perspective but can point out what others overlook is also a significant obstacle for innovativeness. Innovation is a different point of view, perception, and interpretation. What creates all these innovative factors is human resources training. Therefore, training is the most critical factor in creating change. However, it is not enough on its own. Innovation also offers valuable contributions to economic welfare, human rights, employment, environment, and health. But, individuals who question the present and are open to change are not always encouraged and supported.

Innovation should be considered a change in the market environment, production facilities, and many other areas (Kline & Rosenberg, 2009). Trained human resources are expected to contribute to innovation in products and processes. The specialized human resources who realized registered inventions in science and technology are considered data for innovation in the USA. In training activities, factors such as encouragement of research and development, intellectual property protection, and technology management are used together (Ocana A., Espinoza R.& Lopez KA, 2020). In innovative companies in China, human resources training and development are

considered as tools to transform the national economy into a global innovation center (Zavyalova et al., 2018).

A study conducted with 700 companies in Russia demonstrated innovation increased with digitalization and R&D expenditures. Data shows that innovative businesses follow their foreign competitors. While businesses that are ahead of others in production look for the best personnel, companies prioritize financial resources. Again, successful enterprises increase their motivation through positive relationships with the state (Simachec et al., 2021). To successfully implement the innovative strategy, employees should be prone to cooperation, creative on an advanced level, tend for long-term thinking, take risks, and do not get uncomfortable with uncertainty. Countries' increasing their power depends on having innovative individuals who can combine their knowledge and skills with environmental factors. These individuals are raised in educational institutions where they receive a high level of education in science, mathematics, and technology and are taught free thinking. Societies and countries with an education system on world standards and generate science and technology ensure the continuity of innovation. States can only realize them within their available capacities. Scientific superiority in the world constitutes the source of economic and social power.

In this respect, our study attempts to investigate the concepts of human resources training and innovation by making a clear definition of innovativeness in detail. Furthermore, this study tries to determine the current status of information-based research institutes and the innovative perspective and carefully address the methods and processes applied for the effective and efficient use of resources.

Human resources training's effects on innovativeness are created and improved by the training they receive and continuity with its reflection on society. Therefore, when human resources training assures innovativeness as social culture, available resources shall be used effectively and efficiently, and thus, economic welfare shall improve.

Despite all these factors, it can be seen from completed studies that not enough research has been done in the respective field. For example, the

impact of human resources training on innovation has not been studied. We believe our study can be able to fill this gap.

As this study attempts to investigate the effect of human resources training, which has gained utmost importance on innovativeness, it is hoped that its results shall provide a modest contribution to a significant resource gap for practitioners, academicians, and students.

1.2. Purpose of Study

The primary purpose of this study is to investigate the effect of human resources training offered in enterprises on innovativeness. At the end of the study, the correlation between dependent and independent variants will be examined. This study attempts to provide a modest contribution to the lack of resources in the literature.

1.3. Importance of Study

The analysis level of this study is enterprise personnel. The questionnaire participants comprise the managers and employees of large-scale enterprises still in operation in the city of Bursa. The impact of the human resources training of enterprise personnel on innovativeness constitutes the basis of the study. In this respect, it was investigated whether there is any difference between human resources training and innovativeness within personnel demographics in terms of the impact of human resources training on innovativeness.

The importance of the study area comprising of large-scale machinery and textile businesses is to investigate if human resources training affects innovativeness in enterprises under the assurance of a private individual. Furthermore, individuals who work under the confidence of a private individual and do not receive human resources training have low individual innovativeness levels. For this reason, an attempt was made to understand the role of individuals who receive human resources training.

Also, it was tried to understand how much innovativeness could be improved by which type of human resources training. This study was conducted in large-

scale enterprises operating in the Machinery and Textile industry, registered at the Bursa Chamber of Commerce and Industry because they are enterprises under the assurance of a private individual and work in different sectors.

1.4. Scope of Study

This study was conducted between September 1, 2017 – November 30, 2017. It covers managers and employees in enterprises operating in domestic and international contract manufacturing with a daily capacity of 45.000 kg/day in a fabric dye finishing facility on a 24.000 m2 area in the machinery and textile industry with a paid capital of TL 9.800.000.000.-, registered at the Bursa Chamber of Commerce and Industry which was founded in 1978. Those who did not volunteer for the study, those who were away from the enterprise for at least three months for reasons such as birth leave, unpaid leave, sick leave on the committee report, military service leave, and temporary commissions, and those who were on a temporary mission in the enterprise between September 1, 2017 – November 30, 2017, were excluded from the scope of the study.

1.5. Limitations of Study

The study is limited on a temporal basis between September 1, 2017, and November 30, 2017. Furthermore, the study is specified on an institutional basis with the managers and employees in large-scale enterprises operating in Machinery and Textile, registered at the Bursa Chamber of Commerce and Industry. Therefore, the results obtained from this study are limited with the perception of the impact of human resources training in the respective enterprises on the innovativeness of the human resources employed in machinery and textile businesses in the city of Bursa.

The study is limited with the participants selected with a random sampling method to represent the population in terms of the study sample. The sufficiency levels of data collection tools developed for the study and statistical methods used for data processing are limited with the participants' responses. The study is limited with questions on a 5 point Likert scale. The questions were not exceeded. The questionnaire did not include semi-structured and

meaningless questions and was prepared in a clear tone. It is possible to extend the generalizability of the findings and results of this study with studies to be conducted with a more comprehensive sample.

1.6. Main Hypothesis of Study

1.6.1. Main Hypothesis of Study

Human resources training has an impact on innovativeness. This is the main hypothesis of this study.

CHAPTER 2
CONCEPTUAL FRAMEWORK

In this chapter, the concept of the effect of Human Resources Training on innovativeness shall be described, the processes of Human Resources Training and conditions which lead to the need for training shall be assessed, and Human Resources Training shall be evaluated.

2.1. Introduction to Human Resources Management

While human resources management (HRM) covers all personnel activities, the impact of HRM training on innovativeness is considered necessary. HRM aims to maximize the organization's efficiency by offering innovative training and support personnel with the information and training they need. HRM engages in activities in line with the purposes and targets of planning, implementation, and assessment by identifying the organization's objectives and requirements and employees.

Information about human resources management is needed to manage personnel in business administration successfully. Human resources management is related to providing, commissioning, and developing personnel to produce goods or services to meet customer needs in a business. Therefore, human resources management is also called personnel management. Finding personnel to be employed in enterprises is one of the essential roles of human resources management. Personnel to be employed in a business is supplied from various resources. These resources include employment agencies, private employment agencies, those who apply to the business in person or via application forms, in-company transfers, job postings

on newspapers and magazines, radio and television, schools, recommendations of corporate personnel, and unions (Tekin, 2017).

Efficient and effective use of available resources is only possible with the correct human resources management. HRM means improving efficiency by systematically evaluating financial resources and qualified labor in line with the enterprise's objectives (Kaya and Kesen, 2014). In the literature, human resources management is considered an output. Ensuring competitive advantage and human resources sustainability is desired with human resources management. The sustainability of competitive advantage depends on it being valuable, rare, imperfectly inimitable, and non-substitutable. Different organizations have led to the need for different employees that exhibit different behaviors at the same time. This development demonstrates the importance of horizontal and vertical harmony (Demirtaş, 2014).

It is crucial to process social and industrial information while evaluating human resources bearing in mind that the human mind does not function specifically. Therefore, employees should be addressed from not only a scientific but also a psychological perspective. Stream of consciousness, acquired reflex, and intrinsic motivator might define what is human, but a human being is more than all of them combined (Mayo, 1923). Human resources management intends to meet needs such as recruitment and selection, performance measurement, training and administration, compensations, and revenues (Huselid, Jackson, and Schuler, 1997).

In today’s conditions, the rapid progress of science and technology has been possible with the increasing importance of brain power rather than physical strength in the production process. Developments in science, technology, and management demonstrate that competitive advantage is only possible with trained human resources. Enterprises’ acquiring power and competitive advantage in global markets depend on improving efficiency and effectiveness through theory and practice (Dolgun, 2011). All these activities require knowledge and professional expertise. Human resources can reach business targets by improving employees' knowledge, skills, and capabilities (Huselid, Jackson, and Schuler, 1997). (Sabuncuoğlu, 2000).

The era we live in has made businesses an engine that defines economic development. Access to information, flexibility, meeting customer demands, access to new markets, preservation of available markets, and efficient use of assets are the factors that determine the future of enterprises (Çatı, Çömlekçi, and Zengin, 2015). While managers take decisions, there are no strict or absolute rules to govern them. Therefore, none of the managers on the same conditions make the same decisions. Taking the right choices considering changing conditions, being flexible and adaptable to any situation is only possible by knowing how to use their experience and skill sets. The purpose is to create a higher amount of and higher quality production with the same working effort (Fayol, 1987).

2.2. Human Resources Management

Human resources management was brought to the scene in the 1970s based on the approach that human resources are different than all production factors. The Taylorist view accepted human resources as an “economic asset” under the effect of economic motives for maximum efficiency (Taylor, 1980). When compared to similar enterprises, it was reported that employees were content with the Taylorist system considering the time they remained employed in the enterprise. It was essential to complain at the same time when shortcomings occurred and organize activities to seek amicable solutions. It was stated that protecting the employer and the employees with fair and democratic strict rules was welcomed by all parties (Taylor, 1914).

The human resources approach opposed this view and considered human resources a “social entity” within the social and psychological components framework and indicated that efficiency and effectiveness would be maximized by motivating employees within individual and organizational purposes (Taylor, 1980).

The Taylorist system was criticized for seeing employees as tools or machines (Taylor, 1914). It was considered as a strict and authoritarian type of management where employees are kept under constant supervision. Employees were only informed about specific tasks and did not have any idea

about the entirety of the job. Therefore, they are alienated from the job and themselves.

The 1980s witnessed significant changes in business and management areas, and Human Resources Management practices replaced Personnel Management practices. Human Resources Management was defined as employee motivation, development, satisfaction, and continuity of productivity and effectiveness. Human Resources Management serves all parties also by addressing productivity and effectiveness through employee satisfaction and motivation (Dolgun, 2011).

Enterprises trained, skilled, innovative, adept in human relations, and have dedicated personnel rise with more strength. The primary role of human resources management is to increase employees' productivity and satisfaction together with planning, policy making, organization, guidance, and supervision factors to gain competitive advantage (Durukan, 2003). In addition, the profession of HRM needs to tackle problems such as rapidly changing work environments, the need for qualified labor in all enterprises, economic uncertainty, and globalization. These and other problems are shaping the present and future of the profession of HRM (Sims and Bias, 2019).

The fact that human resources management affects innovativeness is the most valuable asset and resource that allows for the survival of enterprises. Human resources are the ones that create, plan, operate, and manage other resources. In enterprises, information is generated by meeting individual, organizational and social needs and producing goods and services. Therefore, in enterprises, accurately creating work, time, and place factors improve effectiveness and productivity.

The human resources management approach indicates that content and satisfied employees have improved score productive and higher performance. Human resources management includes all activities conducted for recruiting and training employees and improving their efficiency. This process creates staff, training, development, motivation, performance development, health, and safety practices. Moreover, new management approaches, regulations of unions, and states emerging in the global world should always be taken into

account (Taylor, 1914). Human resources require knowledge and experience in numerous fields such as human psychology, accounting, sociology, and productivity. Therefore, human resources managers should be versatile and flexible.

2.3. History of Human Resources Management

First, we need to address main periods in work-life to approach Human Resources Management history accurately. Thirty-two different professions emerged in the cities of Anatolia after the Ahi community was established at the beginning of the 13th century during the reign of the Seljuqs. The foundations of the industry were laid in a way similar to the industrial zones of today. Customers and tradespeople were assured of specific labor laws. The Ahi order carried the components of employee motivation according to the Hawthorn studies and Total Quality Management and Human Resources Management that started to be implemented in Japan in the 19th century, six centuries later (Bayram, 1991). Documentation penned by Koçi Bey in the 17th century covers work analysis, work specifications, work simplification, and human resources management practices (Demirci, 2020). Together with the broader use of machinery, employees became financial expenses, and they were called personnel. After the 1980s, however, the importance of the human factor started to receive attention (Geylan et al.). Taylorism, which keeps employees under supervision and divides the production process into minor segments, emerged during World War I, towards the end of the 19th century.

Taylor and Fayol offered a mechanical scientific management approach to human resources management with conventional theories. When employees started to be seen as entities after being seen as economic assets, the Human Relations Theory was accepted. After that, personnel management that covers all employees but excludes the enterprise owner was created. After all these developments, it was found out that personnel management alone fell insufficient, and the Human Resources Management approach was adopted. Studies in this area started with the industrial revolution, and management became a science (Taylor, 1980).

Although the human and management relationship started in ancient times, the employment of human labor began with the Industrial Revolution. Mechanization and factories allowed for the Industrial Revolution. New production techniques were developed with steam machines, major companies were established, and mass production started with labor division. After this process, working conditions got worse, and conflicts arose between the employer and employees. Human-machine relationships were developed with industrialization, and technical aspects gained importance. Taylor, Fayol, Weber, and others addressed production methods and did not see the human factor as a significant determinant. In this period, people were believed to be driven by economic rewards. Approaches towards humans result from the Classical Organization Theory in classical theory, and the classics identify the organizational human as the “rationalist-economic human” (Kaptangil, 2010).

Reason and understanding might be vast but slow. Social development has sensationalized humans, and various methods have been developed for increasing employees’ motivation. Although it has been understood that the human factor is essential, erroneous and nonfunctional organizations have still been implemented. High labor turnover or strike is a social, industrial, and chronic disease. The primary necessity is diagnosis and resolution. Thus, it will provide less conflict and more progress. Employees’ demands for higher wages have constantly increased. However, in many sectors, amounts exceeding a certain income have been rejected. As a result of neglecting humans' complicated and psychological characteristics, the political economy collapsed in the 18th and 19th centuries (Mayo, 1923). At the end of the 19th century, Human Resources Management witnessed significant developments, and employees started to be considered a resource rather than an expense or burden.

2.4. Human Resources Management Functions

2.4.1. Scientific Management Approach

People who quit farming and started working in factories during the Industrial Revolution could not adapt to the industry. As a result, the Scientific Management Approach of Frederick W. Taylor began to be implemented to

ensure employees worked efficiently, productive, and disciplined. Taylor divided the production process into simple parts with work and time studies, increased motivation with premiums and bonuses, and wages, and focused on employee productivity by employing experienced headmen and punishing those who acted in violation of scientific approaches. In this period, what is desired was establishing cooperation instead of class. As a result, the scientific management approach became widespread in the business world and all areas of society, and it became harder to acknowledge and challenge it consciously. The main ideas from scientific management included corporate social responsibility and management studies (Hill and Van Buren, 2018).

Henri Fayol, accepted as the successor and complement of Taylor, addressed employees, senior management, operation, and management as a whole for the first time.

Henri Fayol reported the following principles of management:

- Commissioning according to knowledge and experience, division of labor, authority, discipline, and unity of command,
- Unity of management in line with targets and purposes, hierarchical structure, esprit de corps, strong foresight, entrepreneurship, establishing a reward and penalty system,
- Increasing productivity with minimizing staff turnover rate and fair treatment.

Fayol focused on operational efficiency, employee effectiveness, and management factors. The principles of Fayol allowed for creating personnel management (Fayol, 1987).

Scientific management is an approach which is considered a mechanical system and examines human resource on a rational basis and requires supervision for improved productivity. This approach criticized this approach because it overlooks humans' emotions and relations (Dolgun, 2011).

Today, it is acknowledged that human is not a machine. Humans act on their senses and emotions. Therefore, they cannot be coded like machines, and

machines cannot have complete human character. Nevertheless, businesses engage in training activities in this respect.

2.4.2. Human Relations Theory

As a result of the experiments Elton Mayo and colleagues started at the Hawthorne plant of Western Electric company in 1924, human and working factors were combines, and the Human Resources Management infrastructure was created. Here, experiments such as lighting, physical fatigue, monetary incentives were conducted, and interview and production process, psychological and social factors were examined (Taylor, 1914). The results of this study emphasized the importance of efficient management and employee relations.

These experiments address human resources on a psychological and social basis, created interaction and motivation, and contributed to HRM. While also being called the Neo-Classical Organization Theory, these experiments also discussed human resources within the framework of their positions, relationships, groups they established, and their psychology (Dolgun, 2011).

If HRM provides aesthetic conditions in their relations with employees, they develop a sense of belonging to the organization, and it allows for transformation where performance could be improved. De Groot listed the factors of performance in the following table (de Groot, 2017).

It has become necessary for HRM to gain competency in today's world, where aesthetic factors have gained importance.

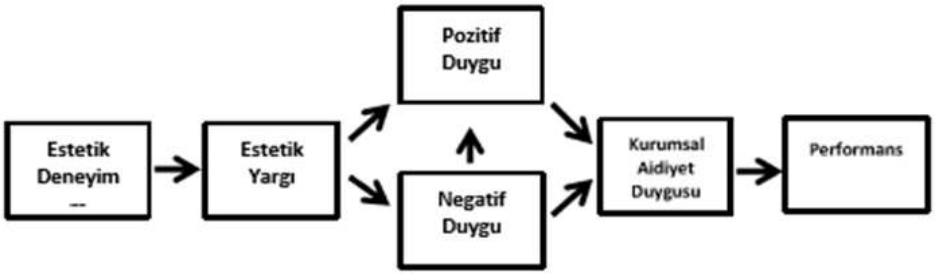

Figure 1. Emotions from Aesthetic Experience and Output

Source: (De Groot, 2017).

2.4.3. Personnel Management

An approach filled with rules, procedures, norms, and bureaucracy was present in traditional personnel management. Personnel departments realized bureaucratic functions such as recruitment, absenteeism, sick leaves, registry, and remuneration in the first period of the 19th century. After the Industrial Revolution, it was followed by legal regulations, social rights, and unionization. The documentation and filing functions of personnel management were replaced by recording the social rights of employees. The unions' efforts yielded fruits at the beginning of the 20th century, and employees' working conditions and social rights were rearranged and put under protection. In the second half of the 20th century, rapid scientific studies and technological advancement created global competition conditions, and employees became a determinant force. As a result of this process, personnel management started to be involved with human resources management, and these enterprises started organizing healthcare, recreation, entertainment, and travel functions (Dolgun, 2011).

When personnel was involved in management, a sense of belonging and cooperation were noticed. The program should be simple and progress slowly. The results should be shared with personnel to prove more productive (Burgio and Burgio, 1990). Investment in human resources is an essential factor in identifying the competitive power of a work unit. An enterprise that does not

have the right human resource cannot operate and succeed. Human resource is an essential factor in management and production (Asenov, 2019).

2.4.4. Human Resources Management

Human resources management started to be accepted when global competitive advantage started to be seen as an essential strength since the beginning of the 1980s. Ensuring the effectiveness and productivity of human resources is tackled within the framework of social responsibilities and employee motivation. The reasons for leaving personnel management and accepting human resources management in the 1980s are explained below. These reasons can be listed as global world markets, impacts of scientific and technological developments on enterprises, industrial changes, strategic management in companies, and the effects of psychology and sociology.

These developments put strategy, total quality, resilience, and organization culture at the forefront and made human resources management a required department for qualified employees (Dolgun, 2011).

Enterprises that realize human resources practices the best need to internalize these practices. Participation, in-company promotion, training, and change improve productivity (Eyüpoğlu, Kocaman, 2006).

The human resources process includes non-homogenous characteristics that are hard to measure with physical, psychological, and social factors. Moreover, it requires statistical information, interpretation, and objectification efforts. Human resources have become the foundation of the production phenomenon and the main subject of all departments. It comprises digital and mathematical aspects on technical terms and psychological and social elements on behavioral terms (Kaynak, 1996).

HRM requires skills, work processes, and differentiation to gain a competitive advantage. HRM reaches a strategic position with labor skills, competencies, loyalty, and increased performance by creating value. In this way, extraordinary performance is acquired with above the average and unique internal resources. On the other hand, relations between enterprises make it

easy to imitate them and cause a loss of value. The determinant factors of competition are work processes, resources, and skills (Becker, Huselid, 2006).

The effectiveness of HRM is determined due to the interaction that happens inside the enterprise and between all enterprises. When HRM practices are not individual but become ja system that covers all enterprises, they offer financial performance and sustainable competition. HRM comprises systems, practices, competencies, and employee performance. Enterprises offer different management and training factors to individuals that are employed in other units to create value. Enterprises ensure their human resource is unique and extraordinary through innovativeness and differentiation created by human resources training.

2.5. Human Resources Training

It has been acknowledged that trained human resource is an important asset. Employees can make a business leader in its field as much as causing it to go bankrupt. For all these reasons, enterprises are constantly working on the impact of human resources training on innovativeness for the continuous development of their personnel. Development of human resources is possible with well-implemented training programs. Today, enterprises measure how many hours of training they offer in a year and share positive data. Enterprises provide orientation training to allow employees to understand the job, how it is done, and their respective rights as soon as possible. Development training is offered for employees to develop themselves. Innovative thinking and creative ideas can be achieved with human resources training.

2.5.1. Definition, Importance, and Purposes of Training

Human Resources Training means acquiring knowledge, skills, and equipment to succeed in a job. In another definition, training means offering necessary information and skills to execute a job (Ersan, 2013). Training is creating the future of society by changing behaviors in some kind of harmony. Training is managing the future by combining the knowledge and experience of the past and the present. Training means ensuring the adoption of necessary knowledge, skills, attitudes, and behaviors, thus creating a social culture

(Taşkın, 2013). The need for a trained and innovative human force equipped with changing and refreshing information to compete in the face of constantly evolving technological and managerial practices points to the importance of training.

Training can be described as activities for ensuring permanent and constant development of knowledge, skills, and behaviors from the start to the expiry of employment. In future years, many tasks that humans are currently doing can be done by machines (Ersen, 1997). Therefore, training has vital importance, and it is expected to go through some transformation and renewal depending on the developments in the changing world. Organizations need to change to get better and more powerful and maintain operations and survive.

Human resources that will allow for developing and transforming information in all areas and industries have become the most critical factors determining the future. Trained and qualified human resources enable businesses to gain power. At this age, it is possible to access all kinds of information. Information is used to eliminate ambiguity in our world (Akperov et al., 2018). What is important is to manage this information through training practices. As a result of training, it is intended to improve knowledge, skills, and behaviors and thus, improve efficiency (Sabuncuoğlu, 2000). Enterprises can adapt to continuous changes in the economic, social, technological, and organizational fields with planned and constant training.

Having trained and motivated human resources has become the main driver of development and change. Training and development require extensive and intensive investment. It is crucial to improve problem-solving skills by creating a common language with a continuous training and reward system (Akın, 2001).

Training is implemented to change and develop the knowledge, skills, and behaviors of employees. Training is a managerial tool that improves the organization’s effectiveness, efficiency, and productivity. Training allows for gaining experience, skills, and achievements for the continuity of success of managers (Durukan, 2003).

Training is the future investment tool of employers and employees while creating job opportunities in the company by improving the knowledge and skills of individuals (Boone and Kurtz, 2013). Therefore, the employer gets long-term, loyal, and high-performance human resources.

It is assumed that with rapid changes, innovation, and transformation in global market conditions, enterprises can survive provided that their learning rate equals to or exceed the rate of change (Kırım, 1999). We are living in a time when demands and requests are limitless. Enterprises seek for new alternatives to survive on these conditions. HRM sees training activities as one of these alternatives because training activities define the future of all departments and the business as a whole (Özkeser, 2019).

Learning how to use a machine with short-term training covers a very narrow field. On the other hand, a longer-term period can be taken into account for change and innovation. Today, many new products and technologies are imitated in a short time. In this context, innovative and creative human resources that can create products that cannot be predicted and are almost impossible to replicate are essential (Ersan, 2013). For this reason, investment in human resources with training is the source of innovation and change. The training process is surrounded by factors that are in a relationship with the internal and external environment. First, training needs, their purpose, and targets are identified. Wrongfully identifying these factors, in the beginning, will cause failure in the process. After that, the training method is determined.

Today, consumers prefer the most efficient product to meet their quality, low price, and other needs. Enterprises are in constant change to meet these requests and demands of consumers. It is only possible to meet changing consumer demands with efficient human resources training. With training, employees' knowledge, skills, organizational performance, and motivation are improved, and as a result, the organization's profits and financial status get better. Training enhances quality and productivity in all areas (Dolgun, 2011). Moreover, it improves the competitive advantage by ensuring constant adaptation, resilience, and change. Skills and competencies get more robust with the combination of theory and practice.

Consumer demands that increase and diversify every day have made it a necessity to offer human resources training. Global competition conditions arising from developing and changing technologies increased the importance of various factors such as quality production, productivity, and performance. The desire to achieve targets and goals in the shortest time possible expanded the extent of human resources training (Dolgun, 2011). The human resources training process starts with identifying the training needs, then methods and trainers. The process does not complete with offering training, and it is also necessary to evaluate activity.

An enterprise or a state laboratory develops as much as their inventions and discoveries are turned into products with high added value and bring money. Thus, they gain a competitive advantage (Eren, 2013). Human resources training should always be determined by considering cultural values, norms, lifestyles, customs, and traditions. Individuals who receive training should be supported to create innovative thoughts and ideas and transfer them to the work process.

In the recruitment process, individuals with unique capabilities and high skills are preferred. An exceptional human capital pool is desired. It has been seen that enterprises that train unique individuals and have solid social communications through group designs, skill development, and empowerment cannot be easily imitated by their competitors (Huselid, Jackson, and Schuler, 1997). Enterprises that cannot be easily copied gain a competitive advantage and continue to generate profits. This inimitability means superiority over others on a global basis. Scientific studies have shown that people have approximate intelligence levels. Therefore, individuals who receive training widen the gap. Human resources that can generate future technologies will be innovative individuals who have received suitable training and have learned free thinking.

2.5.2. Benefits of Training

Enterprises that access qualified human resources by improving the skills and capacities of their employees considering the impact of human resources

training on innovativeness gain competitive power on the global market. The benefits of effective training can be listed as:

- Individual, team, and organization performance improves, and high-quality products are created in a short time,
- Skills and capabilities improve, and flexibility is obtained in all functions,
- Sustainability is obtained in the development of human resources,
- Job satisfaction, motivation, and loyalty to the company are guaranteed (Dolgun, 2011),
- Employees' knowledge is refreshed, their self-confidence improves, and problem-solving gets easier,
- Employees love their job, error rates drop, and productivity improves,
- New employees take a shorter time to adapt and learn,
- Employees' turnover rate drops,
- Inspection and control costs drop, harmony and integration are guaranteed (Taşkın, 2013).

As a result of training, human resources development becomes continuous, and quality service, cooperation, new methods, and products are ensured (Dolgun, 2011).

Training offers benefits in economic and social aspects. Financial purposes are described with the term "training for production". Enterprises provide training to their available human resources and obtain maximum outputs with minimum costs. Enterprises get improved production and quality rates, lower costs, lower work accidents, lower overtimes, lower mistakes, rational use of time and machinery, lower turnover rate and absenteeism, improved work methods, and lower inspection costs resulting from training. Considering its social benefits, the survival of enterprises depends on the direct and indirect impact of humans. Humans are both consumers and producers. This alone

shows that enterprises are at the service of people. Therefore, human resources training and innovativeness bring benefits to companies and people. With training, improved production, promotion, motivation, tolerance, cooperation, quality, and innovation are scored. While training which is of priority for enterprises and individuals, guarantees developments in the economic and social circles, it also allows for the development of human beings and societies as a whole (Sabuncuoğlu, 2000).

The purpose of Human Resources training is to increase employee motivation. Motivation can be described as all feelings, thoughts, and instincts that move people towards working and producing. In a global world, businesses need to guide their employees towards their own goals to gain superiority over their rivals and make profits. Especially in developing countries like Turkey, motivation has become much more critical to use employees' potential to a greater extent. However, it is a challenging task to motivate employees. For this reason, employees need to develop their skills in a multidirectional way and put a great effort most of the time. The success of an enterprise depends on its employees' working with ambition for the organizational goals and using their knowledge, skills, and power in full (Tekin and Şahin, 2014).

Human resources training allows employees to know the organization and processes and develops human relations and management skills in our era. Moreover, it guarantees individual and professional development. Therefore, while loyalty to the organization is improved, who attend training offered in the company, loyalty drops attend training outside the company (Kaygısız, 2014). Training also provides benefits such as improved work performance and reduced operational expenses. In addition, human resources training has increased innovativeness and loyalty to the company (Jaworski et al., 2018).

2.5.3. Design of Training Process

The Human Resources Training process can be designed in many ways today. However, it can be seen that systematic and planned training is preferred more, considering practices (Dolgun, 2011).

It is essential to implement training to allow employees to choose and make room for recommendations of both employees and employers. Training has a social purpose and social responsibility (Taşkın, 2013).

Some people suggest that an entire lifetime is a training period. That is to say, and it is underlined that an individual is in a training process from birth to death. The training process covers programs offered in or outside the organization in which individuals develop their knowledge, skill, and competencies through their efforts or experience (Koçel, 2014). Training has brought all sectors and businesses to the forefront.

2.5.3.1. Systematic Training

Systematic training was developed towards the end of the 1960s, and four models were suggested to meet the needs. These models are:

- Identifying training needs,
- Identifying which training will meet the identified needs,
- Ensuring training is offered by experienced and competent trainers,
- Improving the efficiency of training by monitoring and adjustments.

This model has its disadvantages, such as simplifying training and failing to define the responsibility of managers and employees. However, these shortcomings can be overcome with planned training (Dolgun, 2011). In addition, systematic training creates a universal program by paying attention to cultural and socio-economical differences (Null, 2011).

2.5.3.2. Planned Training

The planned training model was developed to increase performance by guaranteeing to learn. They are annual training programs that are created by identifying the training needs with developed tools and methods. Businesses fail because of wrong financial calculations, insufficient competence, and

cultural discrepancies. Training is planned according to business mergers, work models designed with new plans, restructuring, and reinvented training methods (Dolgun, 2011).

These processes give personnel new skills and guarantee information flow, mutual learning, innovation, and operational vigor. HRM efforts focus on human capital. Training and practices make personnel generate information and turn them into skilled, smart, intelligent, creative, and questioning individuals (Sabuncuoğlu, 2000). Training is planned according to the needs of employees and the demands of customers.

2.5.3.2.1. Identifying Training Needs

The human resources training needs vary by department and operational field in a company. In this process, what kind of training employees need is identified. Then, superintendents of the employee meet training needs through human resources management (Ersen, 1997).

Training is offered before the job starts covering many aspects: workplace hazards, workplace health, safety, protective equipment, workplace maintenance, and order (Taşkın, 2013). Individuals to be given training are evaluated regarding their educational background, and their individual and organizational training needs are identified. Therefore, training is offered according to their needs, and development is achieved (Ağca and Menteşe, 2013). Under the light of possible problems and interruptions, training and resolution methods are created (Dolgun, 2011). It aims to ensure the respective tasks are executed more efficiently and effectively due to the promotion of the personnel in the company and improving their technical skills (Sabuncuoğlu, 2000).

The need for training arises from organization, duty, and human resources factors. Although training brings a financial burden, its return on investment rate will exceed the cost when implemented accurately and efficiently.

Organization: Training needs might occur as a result of assessments of internal and external factors. Training might be needed for errors, mistakes, launching new departments, and starting operations in new business fields.

Duty: Job requirements, information, skills, and competencies required by human sources can be identified due to work analyses.

Human Resources: Performance assessment, questionnaires, and interviews might be conducted to identify the training needs of human resources. Training can be planned under the light of collected information (Ersan, 2013).

Raising individuals who can think from a universal perspective in the information society we live in, question information, resolve problems, and work in cooperation are among training needs (2018, Cemaloğlu et al.).

2.5.3.2.2. Identifying Learning Needs

Identifying the learning needs of human resources is identifying information, skills, and methods to be learned and developed (Dolgun, 2011). Identifying needs allows for identifying the learning-teaching process that is suitable for the targets and needs. While creating a training program, goals, subjects, learning-teaching process, and assessment process are implemented. First, training needs should be identified. The need for learning should have occurred and have been identified. While recognizing the needs, it is necessary to consider individuals, enterprises, and society (Karacaoğlu, 2009). In-service training is essential to acquire needed information, skills, and behaviors due to innovation and developments in operation (Ergin et al., 2011).

2.5.3.2.3. Identifying Training Targets

The subjects to be learned in training and practices to be rendered after training should be identified (Dolgun, 2011). Modes and methods that improve thought development which can be realized together with trainees, can be targeted (Sabuncuoğlu, 2000). Transferring information to the personnel, allowing for the adoption of factors such as loving and learning, can be targeted.

2.5.3.2.4. Planning Training

After training needs are identified, training planning in six-month periods is required. Individuals to attend training are informed by the human resources management with a training plan. Encouragement of trainees is vital for

ensuring attendance (Ersan, 1997). Suitability of training methods in line with needs and goals and the place of training is important (Dolgun, 2011).

After identifying the training method such as on-the-job or external training, explanation, case study, group talks, roleplaying, and other methods should also be identified. The business can perform in-house training as well as out-of-house training with higher costs. All of them should be determined based on purposes and goals (Sabuncuoğlu, 2000).

External training gives the enterprise a new perspective and a new horizon. After identifying the needs of available human resources, four factors are important in preparing a training program.

Training Topics: Urgent and essential can be given priority according to the outcomes of studies conducted to identify training needs.

Way of Thinking and Motivation of Trainees: First of all, the training program should be prepared according to the current knowledge level of employees. Individuals are ready for training and highly motivated, indicating their maturity and experience and improving training efficiency. Furthermore, managers increase trainees' motivation by describing prospective positive changes to be achieved through training and supporting them in this respect (Ersan, 2013).

Before training, personnel should be taught the benefits and prospective convenience of training and ready on an intellectual level. Before the actual training, the preliminary training prevents negative attitudes and resistance (Yeniçeri and Demirel, 2011).

Learning Principles: Productivity is achieved when targets, meaningful examples, modeling, individual differences, practice and repetition, segmentation, and feedback factors are achieved.

Characteristics of Training: The support of the trainer and the following factors make the training successful.

Knowledgeable: Trainees should think that the trainer is knowledgeable in work and organization.

Suitable: The Trainer manages the process depending on the trainees' perception and understanding.

Sincere: The trainer communicates honestly and sincerely.

Humorous. The trainer offers training by making it fun.

Interesting: The trainer improves productivity by drawing the attention of the trainees.

Clear: The trainer gives clear information and ensures information and success are permanent.

Assistant Support: If training is not one-to-one, it can be offered more smoothly with the support of an assistant.

Willing: The trainer is willing to demonstrate contentment with the program (Ersan, 2013).

2.5.3.2.5. Identifying Trainers and Trainees

It should be determined if the trainers will be selected from inside or outside the organization, and distribution of roles should be chosen among the personnel (Dolgun, 2011).

Trainee personnel is determined by evaluating previously identified training demands, the educational level within training, age, professional knowledge, room for improvement, and the respective department (Sabuncuoğlu, 2000).

2.5.4. Implementing Training

Today, we see many training practices. However, on-the-job training, external training, and orientation training are the most implemented (Dolgun, 2011).

Which methods to follow for implementing training is determined by evaluating factors such as knowledge levels and the number of trainees, the time reserved, budget reserved, and trainers (Sabuncuoğlu, 2000).

The offered training improves knowledge, competency, and capabilities (Dolgun, 2011). While implementing training, the trainer should engage in

helping, loving, constructive, and sincere acts. An open and clear environment that assures trainees should be established. Managers should also attend all stages of training for employees to find support and the opportunity of practice. The trainer should focus on the strengths of individuals and carry them to perfectness in the field they are successful. The question and answer method can be applied due to cause and effect relations, giving examples, purpose, criticism, consequence, discussion, draft, introduction, reminder, and observation. The trainer should prepare a suitable program for the selected topics and execute training with appropriate training materials (Taşkın, 2013). True learning is only possible when training is consolidated with practice.

2.5.4.1. On-The-Job Training

On-the-job training is the most common practice that gives necessary information and competencies to new employees by the employer who has experience in the job. Educational institutions can also achieve efficient learning by offering internship, full-time, and part-time working opportunities. Lowering costs, offering opportunities for practice, and receiving feedback are the advantages of on-the-job training. On the other hand, the fact that training is not regular and trainees adopt the shortcomings and deficiencies of the trainer are the negative aspects. The upper management organizes these trainings according to the goals and needs of the organization (Dolgun, 2011).

It offers to learn with working when applied to new employees (Şahin and Güçlü, 2010). A large majority of training activities are on-the-job. This method is both easy and cost-effective. The fact that the work is not interrupted during training and employees are allowed to practice theoretical information is significant (Öcal et al.). Therefore, work and training are realized together.

If the immediate supervisor knows the weakness and deficiencies of the subordinate, it improves the impact and success of developing knowledge and skills and learning by practice. It is preferred more by enterprises as it costs lower. The time taken for the subordinate to training depends on the candidate’s ambition and willingness. Moreover, if the supervisor does not have enough time and is negligent, it negatively affects the process (Efil, 2002).

It aims to communicate the human resources' authorities and responsibilities horizontally and vertically and gain skills that are not essential in the current position. Organizations desire the development of individuals who work in low-level jobs that do not require knowledge and skill. Furthermore, individuals are given the training to fulfill different roles for a temporary period. Change of roles can happen between the same levels or an upper level, and it can take a few hours or a year. Therefore, both on-the-job training and coaching and mentorship are essential and emphasized (Ersan, 2013).

Knowledgeable and experienced employees offer on-the-job training. With this training, an employee learns by helping the experienced employee in a job. McDonald's focused on the importance of training with an economic incentive plan initiated in England. As a result, they recruited 6.000 apprentices in the first year and 10.000 apprentices in the second year of the apprentice training program (Boone and Kurtz, 2013).

The efficiency of the method of learning by implementing on-the-job training is undoubtedly used commonly. Experienced managers realize on-the-job training to improve the efficiency and productivity of personnel.

Benefits of on-the-job training:

- Training which is offered by practicing on-the-job is effective and permanent,
- Participation of managers in training makes personnel work to learn,
- Mistakes during training give experience,
- Practice during training makes knowledge permanent,
- In practical training, training expenses are lower (Sabuncuoğlu, 2000).

Disadvantages of on-the-job training:

- The person who gives training might not be a good trainer,
- Training information might have expired, and technological information might not be up to date,

- Faulty production is possible during the learning period,
- The training environment might not be suitable due to internal factors such as noise etc.,
- The high number of trainees might lower the productivity of training (Dolgun, 2010).

Orientation

It is the training applied to employees who recently joined the company or changed departments in the company. Here, the goal is to acquire the fundamental, intellectual and physical capability required by the job (Öge and Karasoy, 2018).

Rotation

Here, training is given to planned departments at the scheduled time. Employees gain experience by working at different jobs. Employees who got bored of doing the same position and burned out can psychologically relax by working in another department (Öge and Karasoy, 2018). In rotation training, employees undertake different roles and observe how products are connected horizontally and vertically, and acquire a comprehensive understanding (DeCenzo, Robbins, and Verhulst, 2016).

Internship

It is implemented to introduce interns to the tasks they will execute in the working environment, give them responsibilities, teach the job, develop their working skills and let them reach theoretical information (Öge and Karasoy, 2018).

It intends to teach the students their future jobs and adapt to the position (Dolgun, 2010). It allows students to evaluate teaching and training, be open to innovative ideas and be productive. Moreover, it is implemented to cut expenses in challenging economic periods (DeCenzo, Robbins, and Verhulst, 2017).

Coaching

A relationship is established between the employee and the supervisor. For example, the employee can ask the supervisor about problems experienced at work, and the supervisor can immediately intervene with and correct errors. Therefore, the employee gets more motivated (Öge and Karasoy, 2018).

It is also possible to prevent mistakes and work accidents with coaching. Failure in establishing efficient communication, weak managers, unsolved conflicts, inability to create compatibility of team work, monotony, and all of these being ignored by managers in businesses rapidly increase employee turnover rate and lower employee performance (Gürhan, 2015).

Apprentice Training

It is offered by specialists and experienced persons to young and inexperienced employees. Here, information about the work and necessary skills are acquired while providing academic and practical opportunities (Öge and Karasoy, 2018). Apprenticeship training is implemented in handicrafts and artisanship. Training about the job is offered with the support and encouragement of the experienced employee (DeCenzo, Robbins, and Verhulst, 2017).

Mentorship

It is described as a field specialist, experienced and knowledgeable persons sharing their knowledge with employees, making suggestions, offering consultancy, and guidance (Öge and Karasoy, 2018). Mentorship is the most efficient way to reach optimum performance. Managers and supervisors encourage employees, support them and let them develop their skills. They examine frequently seen problems and show ways of solution. Therefore, mentorship is the most effective way for people to succeed (MacLennan, 2017).

2.5.4.2. External Training

External training is realized by undertaking roles outside the respective job area, attending seminars, certificate programs, case analyses, conferences, and e-learning support. It is also provided through technical schools, consultants, chambers of commerce, and industry. However, if the purpose and culture of the enterprise are not described clearly even when these trainers are adept in training techniques, this advantage can simply turn into a disadvantage. These trainings can be offered by individuals inside the company or persons not employed (Dolgun, 2011).

It intends to allow employees to gain knowledge, skills, and competency with observation, review, and discussion. In external training, employees pay more attention and interest to train (Şahin and Güçlü, 2010). However, the lack of materials and practice which can facilitate understanding is considered a disadvantage.

The most significant characteristic of external training is that it is offered theoretically. A comprehensive perspective is drawn by feeding principles and rules systematically. Personnel’s overseas and external training raise costs. It is more cost-efficient to provide this training in groups inside the company. It contributes to the personnel in many aspects, enhances their knowledge, skill, and capabilities (Sabuncuoğlu, 2000).

Seminars

Seminars are offered in hourly or daily periods by field specialist trainers to develop the individual or the field of operation in use or internal or external resources.

Certification Programs

These programs are offered for the development of trainees in a particular professional field or individual development.

Case Analyses

These practices provide the individuals with the capability of solving real or hypothetical problems by combining roles and/or games. When roles or plays are not used, group debates are organized for a case with the individuals.

This training was first introduced to the education area in the USA in the 1920s, and later on, it was offered in business administration to young managers in different countries. It means presenting a case or a subject to a group to be discussed for a purpose. Here, candidates learn how to evaluate alternatives, make decisions, improve their capabilities, identify problems, and understand their importance and root causes. Moreover, the ability to express opinions, convince others, respect others' views and speak at the right time at the right place is developed. Its advantages and disadvantages can be listed as follows:

Advantages:

- Ability to work in groups
- Ability to make decisions, make analyses and solve problems
- Ability to express opinions, convince others and speak at the right time

Disadvantages:

- Takes a long time
- Focus is lost if the manager is not efficient in discussions
- Hard to reach accurate information about the subject (Efil, 2002).

Conferences

They are speeches rendered to provide information about a specific subject (http://www.tdk.gov.tr). Conferences allow for sharing information with the audience. The speaker has the freedom to choose which method to follow and what to emphasize while giving the presentation, but its success depends on the speaker's capability. Its advantages are making a presentation to a large group, taking a shorter time, being a standard method, and not requiring any work done by the group. Its disadvantages are the difficulty of drawing the group's attention until the end of the presentation. The language and the

possibility of forgetting what was told in the presentation are important (Efil, 1998).

Information is transferred to others. The success of this method depends on the capability of the speaker.

The advantages of this method are:

- A well-accustomed method
- Take a short time
- Presentation to large groups
- The audience does not have to make any preparations

The disadvantages of this method are:

- The speaker needs to use an explicit language
- The audience should always focus on the speaker
- What is being told verbally can be forgotten later
- It might go out of focus if the presentation is not well planned (Efil, 2002).

E-Learning

It is challenging to evaluate activities in the field of e-learning from a broad perspective and establish a common viewpoint (Gürcan, Özyurt, 2020). The training process and tools have changed over time and led to economic, cultural, and technological innovations. As a result of these changes, training environments, styles, processes, and preferences have diversified. Therefore, remote or online training practices have been adopted (Öztemiz, unknown date). It includes system, audio, graphic, and video files that can be accessed any time on the internet or by a computer, and it also offers many other alternatives (Ersan, 2013).

2.5.4.3. Orientation Training

These are the training programs realized to allow new employees to get to know the enterprise and its structure, operations, authorities, and responsibilities (Şahin and Güçlü, 2010).

Orientation training is given to those who are new on the job. Studies show that new employees decide whether to work or not work in the enterprise in the first ten days. Therefore, orientation training is crucial.

Orientation training includes:

- History and mission of the enterprise
- Managers of the enterprise
- Activities of operational departments in line with the vision of the enterprise
- Rules and organizational culture (Dolgun, 2011).

Orientation training provides the following contributions:

Information that is satisfactory to the personnel is provided about the enterprise, its policies, organization chart, production process and fields, social responsibilities, and personnel rights. At this point, unnecessary information should be avoided, and necessary information should not be missed out.

Orientation training allows the individuals to see business needs and compare them to their available skills.

The individual feels social cohesion and acquires a feeling of belonging to the company. Therefore, it allows for using the skills and capabilities of the individual efficiently and productively.

When the personnel is new on the job, they are curious, willing, and open to learning. This power of the individual should be used to the most considerable extent.

In orientation training, as the job requirements are stated, possible interruptions and accidents are prevented and left an individual on his/her leads to loss of motivation and low efficiency, even quitting the job.

Personnel is challenged by the work, working environment, socialization, and similar factors in the beginning. Therefore, orientation training that is implemented from day one enhances harmony and efficiency. However, this training is only for the beginning, and it is vital to maintain its effects in line with the requirements (Sabuncuoğlu, 2000).

Orientation training is effective in teaching the organizational philosophy to new employees. Information is shared about service conditions, charters, working plans, and work schedules. Personnel is given information about promotion requirements and when to apply for that (Antwi, Tampah-Naah, and Buame, 2019). Orientation training allows human resources to work more innovatively and effectively and lowers the personnel turnover rate.

2.5.5. Assessment and Evaluation in Training

Training is considered an investment that determines the future of enterprises. Therefore, enterprises implement assessment and evaluation to measure training effectiveness, economic benefits of training, and development of trained personnel at the end of the training. Assessment is indicating data in digital symbols. Evaluation is comparing these two conditions with training, development, and transformation in the personnel's knowledge, skills, and capabilities. Assessment is measuring the change with digital symbols. Comparing the status before and after training is an evaluation (Sabuncuoğlu, 2000). Evaluation of training should continue to identify and eliminate shortcomings in the training process. Training evaluation includes goal and system-oriented approaches (Dolgun, 2011).

The thought on the individual’s performance and sufficiency mean competency. The individual seeing themselves sufficient determines the start and progress of initiatives and behaviors. All human resources positively respond to honest and consistent evaluations, which improves productivity and

profitability. All parties benefit when individuals take part in the process and see their strengths and weaknesses and understand their roles in the job. As a result of the evaluation, decisions are made on wage, promotion, additional training requirements, transfer, and end of employment (Boone and Kurtz, 2013).

It is the process that takes to carry employees from the current condition to the desired state. Trainees start this process with their existing knowledge, go through a field of learning and arrive at the desired condition. Therefore, managers should define a Country of Learning, Field of Learning, and Path of Learning for all employees.

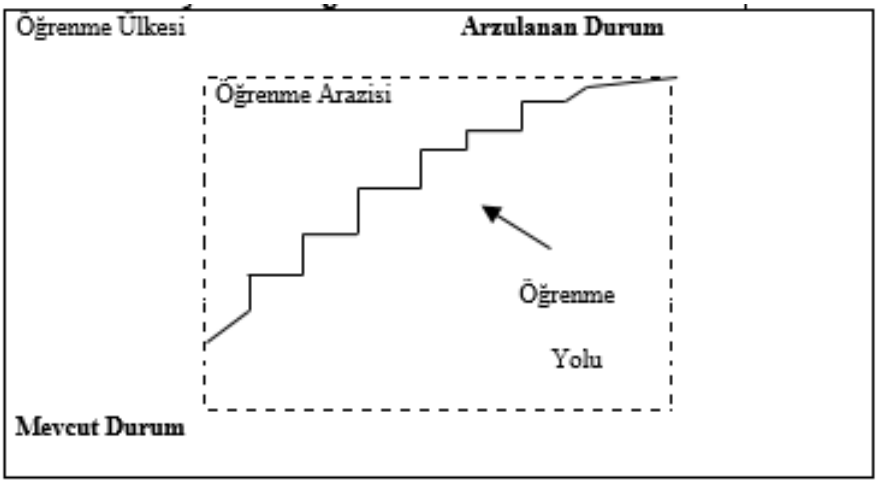

Figure 2. Monitoring of the Learning Process

Source: Taşkın, 2013

The learning process is monitored in Figure 2. It is comprised of knowledge, skills, attitudes, and behavioral characteristics.

2.5.5.1. Assessment in Training

The efficiency and productivity of the assessment procedure depend on the implementation of many factors. These factors are:

- The object to be assessed is identified.
- Assessment is indicated in numbers.
- Assessment should be objective.

- Assessment tools should be reliable.

Assessment procedures are executed on a written and verbal basis, including behaviors, skills, and achievements. Cognitive characteristics such as knowledge, analysis, and synthesis, psycho-motor characteristics such as skills, compatibility, invention, and behavioral characteristics such as personality, culture and values are handled with assessment. These tools used in assessment should be reliable, valid, and objective. (Sabuncuoğlu, 2000).

Learning assessment methods and opportunities for implementation are among the important determinants that managers need to have on today's conditions (Newbold, O., translated, 2009).

2.5.5.2. Evaluation in Training

An evaluation is made to determine the current status before training. Another evaluation is completed after training to identify pre- and post-training knowledge, skills, and capabilities. This evaluation includes trainers, organizers of the training, and trainees. Evaluation of trainers is realized by expressing their opinions by filling out a form.

Evaluation of the operational departments that carry out training or evaluation of external training is realized by trainees and trainers by expressing their opinions by filling out a form. Evaluation of trainees is the measurement of contributions to the enterprise and the individual after training with changing methods depending on trainees. Evaluation of trainee managers is realized with the observations of superiors, subordinates, and peers after three months. Office employees are evaluated with trainer exams and observations of their leaders. Finally, workers are evaluated by their superiors and with tests conducted by trainers.

Time-dependent evaluation methods are implemented to evaluate productivity after the completion of training. These are preliminary evaluation, interim evaluation, final evaluation, and follow-up evaluation.

A preliminary evaluation is realized to determine the current position of trainers, training units, and trainees before training.

Interim evaluation determines the suitability of training, methods, and tools during training.

The final evaluation examines the achievement rates of goals identified before training.

Follow-up evaluation examines the impacts of knowledge, skills, and behaviors acquired after training in the process (Sabuncuoğlu, 2000).

Employees who complete the training program want to implement what they have learned in their job through new ideas, approaches, and methods. Observation and identification to what extent trainees implement what they learned in training in their careers by their supervisors and peers will be helpful for employee development. Successful training is realized by progressing on the previous stage and supporting post-training practices. Moreover, it is important to ensure that all managers grasp the importance of training and keep it. Training evaluation aims to collect information to use to improve the training and development process and maintain quality. All components of the process and their interactions should be examined. Although evaluation of trainers is not the purpose, it is important for being a part of the process. If any of these factors fall below the standard, it is impossible to conclude that the program has achieved its goal. The opinions of trainees about the skills and strategies of trainers, materials used in training, the content of classes, the time reserved for the program, ability of trainees to use what they learn in training in their jobs are topics to be examined (Palmer, Winters, 1993).

Today’s businesses have acknowledged the importance of human resources and know that it is the factor that determines the future. In selecting employees for a job, past trainings, capabilities, work experience, and a suitable background are determinants. Improving employees' capabilities and ensuring compliance with the purposes of the business are realized through knowledge, skills, and experience offered to employees (Taşkın, 2013).

Efficiency measurement conducted in all human resources factors should also be implemented for training programs. There are suitable methods to find out which training programs improve learning, work, and performance. However, the number of institutions that evaluate the training program by using these methods is deficient. There are four main methods in the evaluation of training programs.

Reactions

As a common practice, the reactions of employees are examined in the evaluation of training. Individuals whose mood and motivation have improved at the end of the training will act willingly. The success of the process will improve with positive reactions by offering opinions and recommendations that will evaluate the instructions according to the business goals (Ersan, 2013). When the positive feedback reported at the end of the training is observed in actions and performance, it can be concluded that training has succeeded.

Learning

Before a training program, individuals' current knowledge and skills should be assessed, and the training program's content should be identified. With assessments at the end of the training, it is possible to see new knowledge and skills acquired (Ersan, 2013).

Training is promising for teaching and research in production-related areas. However, although learning factories have been established in industry and academy in recent years, a comprehensive scientific approach is yet to be developed (Abele, 2017).

Behaviors

In assessments made at the end of the training, it is possible to see an improved reaction and learning data and, thus, change current behaviors. However, it is also possible to not see any change in behaviors despite high scores (Ersan, 2013). If there is no change in behaviors, managers can remind individuals what they have learned about the operation and behaviors to change.

Conclusion

Training programs evaluated based on identified conditions aim for productivity, motivation, low costs, high profits, and customer satisfaction (Ersan, 2013). Furthermore, it is intended to be a leader by developing departments and practices with training and long-term planning considering global conditions. Therefore, training costs and profits are essential, and higher profits are desirable.

Einstein said: “The true sign of intelligence is not knowledge but imagination.” Employees should have skills of imagination at the end of human resources training. Creative ideas, thought, and dreams should be generated. It is not sufficient to load data to employees with training activities. It should be ensured that human resources discover new pathways and methods because they have improved their imagination, dreams, and expectations. It is imperative to discover dreams and ideas suitable to the requirements of the information era that we live in. Qualified and entrepreneur human resources require management that supports creating new ideas and an organizational culture that supports innovativeness.

Training is the foundation of innovativeness. When innovativeness started to be perceived as an idea, people began to make innovative inventions. With human resources training, it will be possible to be at the forefront in many areas, such as new products, systems, and services, with the help of innovative and creative individuals. Atatürk cast a light on the future with his statement, “Success on the road to civilization goes through innovation.”

CHAPTER 3
INNOVATION

The century that we live in has brought importance to information, time, quality, and flexible production factors and prioritized innovation in all areas on global competition conditions. Therefore the impact of human resources training on innovation has become a determinant of all industries and processes: individuals' ambition and interest feed innovation. Individuals who are prone to learn and be trained have a higher chance of success than just knowledgeable. For that reason, it is essential to start training starting from childhood based on curiosity and interests and then present the current world. If training success is only measured with exam results, we will keep paying billions to the latest products and software. However, when the will to learn, ambition and curiosity can be measured, we will produce innovative works. In this chapter, the concept of innovation is described briefly, followed by a detailed description.

In recent years, the concept of innovation has been going through conceptual chaos. A scientific approach to the idea of innovation is believed to overcome this situation. In this framework, an innovation definition will be made in the first place, and importance, characteristics, and types of innovation will be identified. Then, the innovation process and factors that inhibit innovation will be examined.

3.1. Definition of Innovation

The first studies on the concept of innovation were carried out by Schumpeter (1934). The term innovation derives from Latin "innovatus." It covers society, culture, and organizational factors. The term novelty used in Turkish does not give the exact meaning. Innovation is a discovery or a thought introduced for

the first time (Ertürk, 2014). It is the process of creating a new idea, a new design (Hasting, 2008).

Innovation that has become vital for all sectors today has been a subject that is intensively worked upon by many organizations and institutions. Innovation is the craft of combining new ideas, processes, and methods and turning them into commercial use and products with high added value. Innovation is transforming thoughts into ideas and making them feasible. Creating new ideas leads to increased value for the company. When new ideas are accepted, they replace previously suggested ones. Innovation means developing further information, skills, processes, methods, products, and services. Considering individuals who realize innovation, it can be seen that the personal traits of these individuals are similar. Innovation allows for acquiring new ideas, processes, methods, and technology (Ersan, 2013).

Mulgan and Alburg (2003) describe innovation as new products, services, and methods that develop high added value with innovative thinking (Mulgan, G. and Albury, 2003). Peter Drucker describes innovation as a new product, service, learning, and practice (Drucker, 1998). Innovation is stated as individuals' developing products, services, processes, and methods using their knowledge, experience, skills, capabilities, and strong foresight (Göker, 2001).

Innovation is indicated as the main factor for efficiency, productivity, development, and presence in the regional, national, and international arena. It is expressed as the innovative culture created with the interactions and cooperation of scientists, poets, painters, sculptors, and architects living in Firenze following the Renaissance (Ülker, 2009). From the 1990s, economists, academicians, and politicians started to recognize innovation (Asheim, Markus, and Trippl, 2015). Freeman Lundvall (1992), Nelson (1993), Nelson and Rosenberg (1993) conducted the first studies on the national innovation system. Freeman (1987, 1995) introduced an "innovation system" concept. Production of products and services has become complicated with information, research and development, and technological intensity in our era (OECD, 1999). Therefore, it has become necessary for countries to enable human and social capital, commerce, and intellectual property to acquire advanced

technology and produce information (Feinson, 2003). Lundvall discussed the importance of cooperation between universities, industries, and public sector, and R&D institutions. The learning factor was expressed as the leading economic power (Lundvall, 2007a), and the innovation process is strengthened by innovative leaders, managers, and trained human resources in cooperation (Lindgren, 2012).

The Oslo Guidelines 2006 described it as innovation in industry, organization, connections, and market. It was observed that 99% of them were a result of development and 1% a result of discovery Considering innovation products (Oslo Guidelines, 2006). Innovation also means transforming new ideas into technical and commercial positions. While discoveries and creating new things indicate invention, creating something that was not previously produced or differentiating what has already been created means innovation. Furthermore, innovation foresees commercialization (Güler and Kanber, 2011).

Technological innovation happens when a technical change is made in producing a product or service in an organization. Technological innovation means presenting a new set of characteristics and modifications. Creating new ideas or inventing new products is not an invention on its own. But, it is an essential part of the process. Innovation is related to new products as much as it is related to production processes. The purpose is to create value due to innovation for the consumer or customer by reducing costs or diversifying products (Tekin and Ömürbek, 2016).

3.2. Importance of Innovation

While innovation covers the private and public sectors, being a guideline in information, transformation, and development within the scope of competition conditions of an organization, industry, region, and country demonstrates the importance of innovation. The internet and online training have facilitated access to information. Innovation also brings social benefits by improving the economy, employment, and living standards. Because businesses and states are made of individuals, innovation offers social benefits in the private and public sectors (Ersan, 2013).

With globalization, enterprises and countries realize innovation intending to maintain or improve their current positions in rapid change and competition conditions by getting into all world markets. All countries in the world engage in innovation activities for sustainable development, improved social welfare, employment, international competition, and improved product and service quality demonstrates the significance of innovation. Innovation improves welfare by meeting all individuals' and society's needs (Güler and Kanber, 2011).

Innovation gaining importance includes eliminating borders, higher demands and expectations of customers, and rapid change (Erciş and Can, 2013).

Innovation is realized through new products, processes, marketing techniques, and new organizational structures. All these developments allow enterprises to be competitive. As a result, innovation has been an essential factor that directs financial performance positively (Yavuz, 2010).

3.3. Characteristics of Innovation

There are many characteristics attached to the concept of innovation in the literature. Innovation activities that are held within the scope of information and technology yield successful results with efficient management. Innovation has specific main characteristics which are essential to know in all sectors for efficiency and productivity. The innovation characteristics include probabilities, complexity, time, passion, resistance, intuitive information, efforts, and needs (Ersan, 2013).

If innovation characteristics seem challenging for today’s work life, it is considered reasonable to support managers in creating new groundbreaking incentives. Managers support innovation by supporting experimenting and risk-taking (Manso, 2017).

It is crucial to consider Chinese management models as they tend to improve the characteristics of information. Shareholders generally approach innovation deliberately and with caution (Frynas, Mol, and Mellahi, 2018).

Characteristics of Innovation:

Probabilities

The set goals and targets have the probability of failure as much as a success due to innovation. Therefore, activities that yield successful results seem to realize many outcomes and determinant factors concurrently.

Complexity

Innovation is not realized with a single discipline, structure, and factor. All factors and disciplines increase the likelihood of success and add value. Human resources that are brought together allow for the resolution of complex and improve the functioning of the process.

Time

Although it is intended to achieve predefined outcomes in predefined times in the innovation process, that's not always the case. The fact that innovation success depends on complying with deadlines makes it necessary to make measurements while the process is continuing.

Passion

There are many obstacles to innovation activities that make it necessary to have passionate human resources who claim this process. Therefore, it is critical to offer moral and financial support and increase the motivation of all human resources in this process.

Resistance

Known risks, ambiguities, and potential changes might cause resistance to the innovation process inside and outside the organization. However, an innovation process that can overcome all these obstacles will succeed.

Intuitive Information

It is important to make intuitive decisions rapidly under the light of available knowledge and experience in the innovation process. Unfortunately, progress

is based on intuitions in times where there is not enough information and documentation.

Efforts

The innovation process includes unpredictable costs, risks, and adverse outcomes. Many efforts are put such as measurements, various approaches, and awarding programs to eliminate possible obstacles. These efforts make the innovation process successful and add value to the parties.

Needs

Global competition conditions have required realizing innovation to meet customer demands, operational requirements, and technological changes (Ersan, 2013). It is suggested that innovation practices create unpredictable values depending on the efficient and accurate implementation of innovation characteristics.

3.4. Types of Innovation

Before the types of innovation, examining the levels of innovation is important for the integrity of the subject. There is a strong connection between the types and levels of innovation. The levels of innovation are incremental innovation, transformational innovation, and breakthrough innovation.

Incremental Innovation

Parties with a lower tendency to take risks have lower innovation levels, and they generally develop incremental innovation. It is considered a small, limited product and service innovation with available information, skills, and experience. Examples of this innovation level might include improving the resolution on mobile phones or enhancing audio performance. Therefore, it is the main factor of improvement realized in a small area for a product or service.

Transformational Innovation

Transformational innovation, a medium-level transformation, is developing an available product and making it reach a better position for exampling turning a black and white television into a color one.

Breakthrough Innovation

Breakthrough innovation means seizing unpredicted opportunities by improving available knowledge and capacity. Changes are made in the fields of production, marketing and sales. Therefore, all processes change, and the market and all actors are affected by it. There are many types of innovation. These types of innovation directly or indirectly affect the internal or external environment. Therefore, innovation determines the future of all enterprises (Ersan, 2013).

3.4.1. Product Innovation

Product innovation acts to create products that are of high importance for the future. Product innovation ensures growth by improving profitability and market share. At the same time, radical design changes in new products mean product innovation. Examples are the toaster shutting down automatically when the bread is ready, software that offers easier use, and developing environment-friendly products. Enterprises that fail to realize product innovation fail in operations and go out of sight (Ersan, 2013).

Product innovation means producing new products and services to increase customer satisfaction and draw new customers to the business (Damanpour, 1991). It means expanding the specifications and quality of products in a company. All these operations are conducted in research and development departments (Akın, 2021).

It means presenting by developing or improving the technical, material, software, and operating properties of a new product or service. It is a development that increases the lifespan or competitive value of a new product or service (Kayran, 2013). It covers developing products that are in production or creating a new product (Eryiğit, 2013). Customers or customers must

demand the unique product made with product innovation should be willing to undertake the price difference with the new product.

3.4.2. Service Innovation

Service innovation means new technology, equipment, or software changes by creating new or improved delivery methods. All machinery, materials, and tools used in the processes before making products and services constitute the backbone of the innovation process (Ersan, 2013).

It is identified as changing the methods of launching products and services (Pelenk, 2016).

Maintaining and improving quality, lowering costs, production technology, and supply method with renewed and enhanced production and distribution methods are covered by process innovation. The effects of process innovation reduce costs and improve production efficiency. In addition, opinions of human resources on all levels and recommendations of suppliers and customers in a further process are essential. With all these factors, lowered production costs reflect product/service quality and prices (Kayran, 2013).

Service innovation is developing and transforming supply and distribution methods with innovative methods. Improving productivity by offering flexibility and accessibility is an example of service innovation (Vardar, 2018). It is a series of functions realized to create new products and services. It includes identifying deficiencies and needs, research and development, and commercialization. A “we” approach needs to be dominant in businesses, and ideas should find support to realize innovation. Enterprises should continue these activities until innovation creating is normalized (Öztürk, 2012).

Flexibility in enterprises has gained huge importance in terms of service innovation and presentation. Individuals that make up the information society with the concept of globalization gradually discover their individuality more. As a result of this discovery, they want to see this individuality in the products and services they need in their daily activities. That is to say; customers want to buy customized products and services. Enterprises can only adapt to this situation with a flexible organizational structure. Today, an enterprise needs to

have a flexible system to survive by taking industrial differences into account. This situation made innovation a requirement rather than still a competitive criterion to achieve customer satisfaction (Tekin and Zerenler, 2014).

3.4.3. Management Innovation

Management innovation is creating a new practice in commercial, internal and external relations. Management innovation intends to lower management costs, improve employee satisfaction and increase productivity, quality, and profitability. In the 1980s and 1990s, many businesses in the USA and Europe engaged in activities to internalize Japanese management techniques. The most important reason was that Japanese companies rapidly grow worldwide through an innovation practice (Ersan, 2013).

It can be observed that enterprises that effectively realize management practices are also successful in innovative thinking and rapid adaptation to change. Moreover, innovation is recognized by developing new products and processes with sharing information. Human resources practices such as training, staffing, participation, performance assessment, and rewarding strengthen innovation. Trained, knowledgeable, experienced, skilled, and motivated human resources realize innovation (Demirtaş, 2014).

Businesses evaluate the factors of increasing innovation, level of adoption, and speed. These factors will be improved when the upper management adopts innovation, and innovation will be executed in the entire business (Sağsan and Yücel, 2010).

It is essential always to take part in the management and make supervision and practice. Considering current practices, it can be seen that a large majority of innovation management models reported the process was not realized efficiently and productively. The reasons for that were suggested to be inaccessibility, complexity, and inconsistency as the academicians failed to communicate. In this context, unions can identify and eliminate gaps, deficiencies, and weaknesses. For management, innovativeness is a linear process that creates new products due to resource management (Adams, Bessant, and Phelps, 2006). The innovation model is detailed in Figure 3.

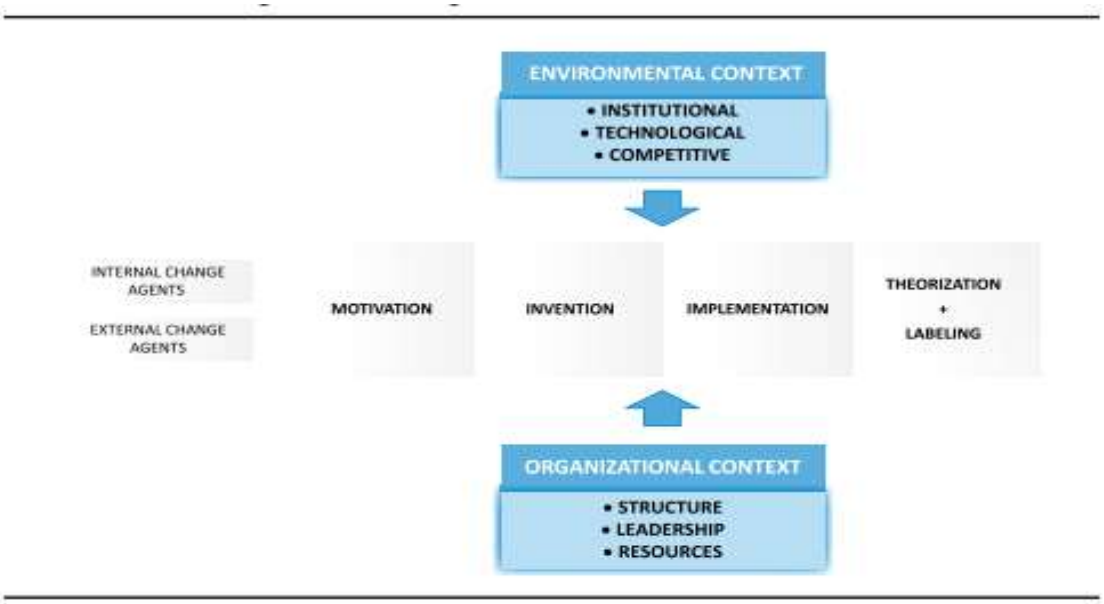

Figure 3. Management Innovation Model

Source: Frynas, Mol, Mellahi, 2018

3.4.4. Positioning Innovation

Positioning innovation means creating a new market that has not existed before and taking part in it. Here, competitors try to take place in new markets by renewing their products and services and lowering their losses (Ersan, 2013).

In developing countries, politicians try to create new jobs and raise new entrepreneurs. Entrepreneurs' creating new stuff creates economic value (Burton, Farlie, and Siegel, 2019). Today's conditions have become a requirement to develop new production methods, new products, new services, and new markets.

3.5. Innovation Process

The innovation process is not a duty of the research and development department, and it is realized with the participation of all employees and

managers. Innovation is realized with the coordination of four processes that are in interaction with each other. These four processes are: create ideas, identify opportunities, development, and conclusion (Ersan, 2013). Process innovation includes improving available processes for products and processes or introducing new methods (Damanpour, 1991). Production innovation activities are carried out with product improvement. Product costs are lowered with process innovation (Kılıç and Ay Türkmen, 2019).

Creating Ideas

Creating ideas is the beginning stage of the process, and it means creating new ideas and developing new solution methods for available problems. Ideas are developed under the light of formal and informal information by following the internal and external environments. Therefore, it must be ensured that all employees should attend the process, and the enterprise should support innovative ideas (Ersan, 2013).

Identifying Opportunities

This stage is intended to associate the new idea with new products, processes, services, and opportunities. Ideas that will bring the maximum benefit and advantage should be brought to life due to scarce sources, the importance of time, and cost (Ersan, 2013).

Development

In this stage, following the finalization of the idea intended to reach perfectness. Then, the idea is examined in terms of feasibility in the internal and external markets due to trials, design, and market studies and prototypes. Finally, the idea is made ready to be applied to the product, process, and service (Ersan, 2013).

Conclusion

In this stage, the reflection of the process on the market, feedback, and outcomes are examined. Obtained results allow for seeing the customer

preferences and developing innovation to succeed. Moreover, it will yield more efficiency and productivity by shaping future innovation attempts. Since innovation is a complicated one, it is vital to execute it in detail, cooperation, and coordination (Ersan, 2013).

3.6. Individual Innovativeness

Individual innovativeness is described as internalizing innovation, being willing for innovation, implementing innovation, and using it (Kılıçer, 2011). Personal innovativeness is implementing new ideas, processes, products, and services of human resources (Özçer, 2005). It develops new products with available information and adds value to these products (Wynstra, Weele, and Weggeman, 2001). It is also essential that ideas and products should be the first for them to be considered innovation.

3.7. Inhibiting Factors in Innovation

There can be many obstacles to innovation. Barriers can arise from individuals and organizations because human resources do not have an innovation culture. They think their ideas will not be realized, and managers do not adopt new ideas. There can be internal and external factors that prevent the creating and functioning of innovation (Ersan, 2013).

The innovation activities of an industry being limited are that only a part of new enterprises supports innovativeness, and innovative culture cannot be established. Moreover, it can be observed that enterprises have certain deficiencies that block innovativeness, and their management approaches can prevent innovation in times of foundation and growth (Öztürk, 2012). Nevertheless, all these factors will lead to innovative activities and inventions.

Size and Age of Organization: It is suggested that small-scale and recently established organizations can realize much more innovation than large-scale and rooted organizations. In this respect, for large-scale organizations to be more flexible and innovative, it is suggested to simplify their structures, use external sources and engage in partnerships.

Presence of Many Similar Organizations: Similar organizations conduct similar activities lowers the success rate of creating difference and innovation

activities. Therefore, a difference can be achieved by restructuring an organization by supporting innovation activities.

Organization Culture: Organizations that have not internalized innovation as a culture lose all their capabilities and achievements and fail on their way to their goals. Therefore, an innovation culture should be created and adopted in line with these targets.

Organization Structure: Another obstacle to innovation is the organizations that have a hierarchic structure. The hierarchic structures are slower in many aspects compared to flexible structures. Because time is the most important resource in today's conditions, it is impossible to compete this way. Moreover, it prevents innovation attempts and misses opportunities.

Access to Resources: It is important to use a part of available resources for innovation. Creating new information-sharing systems, innovation units, and new laboratories is essential. All these activities will be executed depending on the sufficiency of available resources.

Level of Risk-Taking: Organizations also have significant risks on the way to innovation. Therefore, those who are unwilling to take risks cannot realize innovation or realize it to a limited extent.

Role of Managers: Managers can trigger the innovation process by giving importance and supporting individuals' ideas, opinions, and recommendations, or they can terminate the process by overlooking them. Managers can guarantee the involvement of employees in the process by creating an innovation culture in the organization.

3.8. Innovation and Human Resources Management

It takes a short time to replace and replicate technology and intermediate products in production and service provision in today's competitive conditions. However, human resources are impossible to copy or imitate.

In the global world market, the leading market power is human resources that developed their skills and competencies, know how to access and use any data, and continuously improve their creativity. Therefore, enterprises that are

aware of this situation invest in human resources and shape their working conditions according to their human resources' needs and demands (Barlay, 2008).

In the literature, there is a limited number of studies on the impact of innovativeness on HRM practices. Laursen and Foss (2003) concluded that organizations should adopt high-performance HRM because these practices prevent centralization and allow for problem-solving on a local level. It means loss of time is controlled on the management level in the organization.

HRM guarantees connection, coordination, and information sharing, which is one of the main requirements of innovativeness among employees. Therefore, the approach for ensuring employee development creates a safe environment in the organization, and thus, the organization fulfills its responsibility to its employees. In addition to that, training positively contributes to employees' development by increasing their motivation to support them and ensure their full participation (Gloet and Terziovski, 2004; Collins and Smith, 2006).

Some of the studies on the relationship between human resources practices and innovativeness are as follows: Jimenez and Sanz-Valle (2005) surveyed 376 companies that had 25 or more personnel in Spain and examined the relationship between the participation of employees, presence of evaluation systems, and use of vast internal career opportunities with innovation. As a result of the study, it was demonstrated that employee motivation increased, and positive innovation outcomes were obtained with innovative activities with performance assessment and internal career opportunities. Chen et al. (2009) conducted a study on the biggest 150 companies in Taiwan. They concluded that effective strategic human resources practices such as training, participation, performance assessment, and wage had a positive relationship with innovation performance. Similarly, Shipton and colleagues (2006) carried out a study on 22 English production companies and demonstrated that training, teamwork, rewarding and wage were determinants of innovation. Again, in their research, Gianetti and Madia (2003) concluded that training activities improved labor quality and employee performance.

CHAPTER 4

METHODOLOGY

4.1. Methodology of Study

Among the primary data collection methods, the questionnaire method was used in the first place to identify the impact of human resources training on innovation in large-scale companies operating in Machinery and Textile that were registered to the Chamber of Commerce and Industry of Bursa.

4.2. Question and Model of Study

This study will examine the impact of human resources training offered in businesses on innovativeness. It is not evaluated on subdimensions of individual innovativeness, but a single dimension covers all of the items. Of the scale items, 11 are positive, and 7 are negative. According to the scores calculated based on the scale, individuals are classified as “Innovative”, “Pioneer”, “Interrogator”, “Skeptical,” and “Traditionalist” according to their innovation status. The main study question was created in light of this classification. The study tries to examine the impact of human resources training on innovation.

This study was conducted with the descriptive study model. The descriptive research collects measurable data that we can use to reach statistical findings. It is a study model that attempts to describe concepts and relations. This study design is demonstrated in the following figure. Moreover, study questions are listed herein.

The detailed research question about the identified study design can be expressed as follows.

Does human resources training of company personnel have an impact on innovativeness?

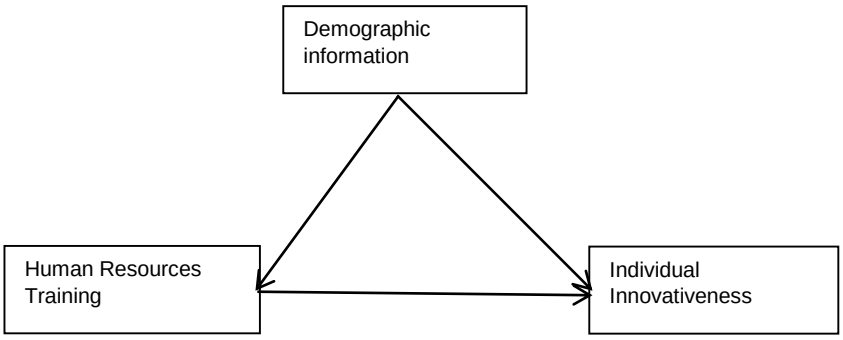

Figure 4. Dependent and Independent Variables with Study Design

Based on the primary study model, the dependent variable in this study is individual innovativeness, and the independent variable is human resources training and demographics. In other words, the impact of human resources training of business personnel on innovativeness is emphasized. Therefore, this is a quantitative study in terms of the study model.

4.3. Population and Sample of Study

A total of 610 individuals, 360 being from Makine Kalıp Yedek Parça San. Tic. A.Ş. company and 250 being managers and employees from the Textile company (offers contracted dye and finish services to domestic and international weaving and knitting groups) were selected as the study sample to represent the population. 360 questionnaire forms were sent to the machinery company, but only 105 forms were retrieved back. On the other hand, of 250 forms sent to the textile company, only 110 forms were sent back. Therefore, the study was completed with 215 samples.

4.4. Data Collection Tools of Study

4.4.1. Socio-Demographic Data Collection Form

The form prepared by the researcher to identify the socio-demographics of the participants includes 24 questions. These are questions on gender, age,

marital status, family structure, educational level, title, time spent under current title, total professional seniority, number of employees in the department, and economic situation that intend to determine the demographics of employees.

4.4.2. Individual Innovativeness Scale

A questionnaire form was designed to be applied to managers and employees in large-scale companies operating in machinery and textile fields registered at the Chamber of Commerce and Industry of Bursa. The questionnaire comprises general questions on demographics in Part 1 and questions on individual innovativeness in Part 2 on a 5 item Likert scale.

Twenty-four of the questionnaire questions are about demographic information and training in companies, and 18 of them were used to measure individual innovativeness. A five-item, 1 to 5, Likert scale was used.

In the second part, the scale developed by H. Thomas Hurt, Katherine Joseph, and Chester. D. Cook (1977) was used to measure individual innovativeness. The validity and reliability of the Individual Innovativeness scale were verified by Ayşegül Sarıoğlu (2014) in Turkey, and it is an innovativeness scanning test comprised of 18 items with score points changing from 1 to 5. In the five-item Likert scale, every statement is scored with 1: Completely Disagree, 2: Disagree, 3: Neither Agree Nor Disagree, 4: Agree, 5: Completely Agree. The reliability factor α of the scale was defined to be 0,89. Therefore, it was reported that the individual innovativeness scale is “highly reliable” with a factor of α= 0,89.

The scale is evaluated not only on subdimensions but on a single dimension covering all items. Eleven of the scale items are positive (items 1, 2, 3, 5, 8, 9, 11, 12, 14, 16. and 18.), and seven are negative (items 4, 6, 7, 10, 13, 15. and 17). The individual innovativeness score is calculated by adding 42 points to the score obtained by subtracting the total score on negative items from the total score on positive items. Thus, the lowest possible score is 14, and the highest possible score is 94 points. Their innovativeness status classifies individuals based on the points scored on the scale. According to that, the individuals are called “Innovative” for a score of above 80 points, “Pioneer” for

69-80 points, “Interrogator” for 57-68 points, “Skeptical” for 46-56 points, and “Traditionalist” for scores below 46 points. Furthermore, it is possible to make a general assessment of the individuals' innovativeness levels according to the scale score. This scale, called the Individual Innovativeness Scale initially, was developed to evaluate the innovativeness of individuals in a general sense. The original form of the scale is available at: www.jamescmccroskey.com/measures/innovation.htm. It is stated on this page that the scale can be used without permission and free of charge.

This study used qualitative study methods. Qualitative research is a type of study that objectivizes? ?concepts and incidents and demonstrate them in an observable, measurable, and numerically expressible way. In the qualitative study method, the direction of the opinion of the study population about the subject of the study is questioned. In other words, it is not an intensive analysis of the subject, but it instead defines the subject with numeric data (Kafadar, 2014: 10).

Approval was obtained to apply the questionnaire to large-scale companies operating in machine and textile registered at the Chamber of Commerce and Industry of Bursa. Considering the questionnaire forms that include 42 questions, 360 forms were sent to the human resources managers of the machinery company. All of the documents were delivered to employees, supervisors, and managers on different shifts, but it was only possible to get 105 forms back. Their human resources managers gave 250 forms to the textile company's employees, supervisors, and managers, and 110 forms were returned. 215 forms in total were taken back. After that, validity and reliability analysis was made for the questionnaire items. SPSS 23.0 software pack was used, and Windows software was used for analysis. All statistical analyses use a 0.05 significance level. The internal consistency factor of the Individual Innovativeness scale was calculated. As a result of this analysis, Cronbach’s alpha was found out to be 0,834. Therefore, the scale was considered highly reliable for this study.

4.5. Statistical Analyses Used In Study

While analyzing the data collected in this study, the statistical analysis of data obtained with questionnaires was made using SPSS 23 software pack and Windows software. First, demographic variables were grouped. Reliability analysis of the Cronbach's Alpha (α) test statistics was used for all scaled items for data analysis. A level of significance of 0.05 was used for data analysis, and all analysis results were interpreted according to the purpose of the study.

A frequency analysis was used to determine the distribution of managers and employees according to their socio-demographic characteristics, and the findings are demonstrated in frequency distribution tables.

The scores of managers and employees in the individual innovativeness score are evaluated not on the subdimensions of the scale but a single dimension on all of the items. Accordingly, the total score of 11 scale items identified positive was subtracted by the total score of 7 scale items that were identified negative, and the result was added 42 points. The minimum possible score on the scale is 14, and the maximum possible score is 94 points. Their state of innovativeness classified the individuals according to the scores calculated on the scale. According to that, the individuals are called "Innovative" for a score of above 80 points, "Pioneer" for 69-80 points, "Interrogator" for 57-68 points, "Skeptical" for 46-56 points, and "Traditionalist" for scores below 46 points. Furthermore, assessments were made on the innovativeness levels of the individuals according to the scale score.

The Chi-Square (x2) analysis was used with cross-tabulation to determine the significance of the difference between the groups. The Spearman's Correlation Analysis was used to determine the correlation between the identified groups.

CHAPTER 5
FINDINGS

This chapter includes findings from the outcomes of the analysis of data collected through scales on the managers and employees who took part in the study to resolve the problem of the study. Explanations and interpretations are made on obtained findings.

5.1. Socio-Demographic Findings Of Managers and Employees from the Questionnaire

This part of the study discussed the socio-demographic information about the managers and employees who responded to the questionnaire.

Table 1.

Frequency Analysis of the Demographics of Respondents

Introductory Characteristics	Number	%
Age		
18-28	78	36,3
29-39	81	37,7
40-50	42	19,5
51+	14	6,5
Gender		
Female	27	12,6
Male	188	87,4
Marital Status		
Single	82	38,1
Married	133	61,9
Educational Status		
Primary	51	23,7
High School	113	52,6
Associate's	26	12,1
Bachelor's	20	9,3
Graduate's	5	2,3

Family Structure		
Nuclear	156	72,6
Extended	57	26,5
Fragmented	2	0,9

Table 1 (Cont'd)

Financial Status		
Very good	10	4,7
Good	31	14,4
Middle	117	54,4
Bad	40	18,6
Very bad	17	7,9
Title		
Employee	195	90,7
Manager	20	8,4
Term of employment on the current position (years)		
1-10	172	80,0
11-20	38	17,7
21+	5	2,3
Total professional seniority (years)		
1-10	124	57,7
11-20	72	33,5
21+	19	8,8
Number of employees in the department		
1-100	204	94,9
101+	11	5,1
Received training for the current position		
Received	162	75,3
Not received	53	24,7
The openness of the enterprise to innovation		
Open to innovation	179	83,3
Not open to innovation	36	16,7

Managers and employees are distributed according to the enterprise they work in as (n=105) (48,8%) Machinery Company and (n=110) (51,2%) Textile Company; by the gender variable as (n=27) (12,6%) female and (n=188)

(87,4%) male; by age variable as (n=10) (4,7%) 17-20, (n=38) (17,7%) 21-25, (n=39) (18,1%) 26-30,(n=50) (23,3%) 31-35,(n=32) (14,9%) 36-40,(n=33) (15,3%) 41-50,(n=13) (6,0%) 51+; by the marital status variable as (n=133) (61,9%) married, (n=66) (30,7%) single, (n=13) (6,0%) divorced,(n=3) (1,4%) widowed (spouse died); by the educational status variable as (n=51) (23,7%) primary school, (n=113) (52,6%) high school, (n=27) (12,6%) associate's degree, (n=20) (9,3%) bachelor's degree, (n=4) (1,9%) graduate's degree or doctorate; by the family structure variable as (n=156) (72,6%) nuclear family, (n=43) (20,0%) extended family, (n=14) (6,5%) semi extended family, (n=2) (0,9%) fragmented family; by the financial status variable as (n=10) (4,7%) very good, (n=31) (14,4%) good, (n=117) (54,4%) middle, (n=40) (18,6%) bad, (n=17) (7,9%) very bad.

Table 2.

Frequency Analysis of the Demographics of Respondents (Cont'd)

Introductory Characteristics	Number	%
Spent the majority of a lifetime in		
Village-Town	47	21,9
District	56	26,0
City	110	51,2
Abroad	2	0,9
Caretakers in childhood		
Family	136	63,3
Mother	15	7,0
Father	2	0,9
Grandparents	1	0,5
Father's Mother	4	1,9
Mother's Mother	1	0,5
Mother and Sibling	1	0,5
Grandfather	1	0,5
Did not respond	54	25,1
Mother		
Alive	196	91,2
Dead	19	8,8
Mother's Education		
Illiterate	43	20,0
Literate	41	19,1
Primary school	87	40,5
Secondary school	37	17.2
University	7	3,3
Father		
Alive	156	72,6
Dead	59	27,4

Father's Education		
Illiterate	20	9,3
Literate	24	11,2
Primary school	91	42,3
Secondary school	69	32,1
University	11	5,1

The managers and employees are distributed depending on the place where they spent the majority of their lifetimes as (n=38) (17,7%) village-town, (n=57) (26,5%) district, (n=120) (55,8%) abroad; by the variable of their caretakers who took part in their childhood as (n=190) (68,4%) family, (n=15) (7,0%) mother, (n=2) (0,9%) father, (n=4) (1,9%) mother's parents, (n=4) (1,9%) father's parents; by the variable of living status of mother as (n=196) (91,2%) alive and (n=19) (8,8%) dead, by the variable of mother's educational status as (n=41) (19,1%) illiterate, (n=40) (18,6%) literate, (n=93) (43,3%) primary school, (n=36) (16,7%) secondary school, (n=5) (2,3%) university; by the variable of the living status of father as (n=159) (74,0%) alive and (n=56) (26,0%) dead; by the variable of father's educational status as (n=16) (7,4%) illiterate, (n=20) (9,3%) literate, (n=112) (52,1%) primary school, (n=60) (27,9%) secondary school and (n=7) (3,3%) university.

Table 3.

Frequency Analysis of the Demographics of Respondents (Cont'd)

Introductory Characteristics	Number	%
Mother's profession		
Retired	8	3,7
Worker	6	2,8
Public officer	4	1,9
Housewife	179	83,3
Other	18	8,4
Father's profession		
Public officer	8	3,7
Worker	63	29,3
Retired	30	14,0
Other	114	53,0
Title		
Employee	195	90,7
Manager	18	8,4
Senior manager	2	0,9

Term of employment in the current position		
0-5	43	20,0
6-10	43	20,0
11-15	48	22,3
16-20	34	15,8
Table 3 (Cont'd)		
21-25	19	8,8
26-30	12	5,6
31-35	7	3,3
36+	9	4,2
Total professional seniority		
0-5	29	13,5
6-10	36	16,7
11-15	56	26,0
16-20	39	18,1
21-25	22	10,2
26-30	20	9,3
31-35	7	3,3
36+	6	2,8

The managers and employees are distributed according to the variable of mother's profession as (n=189) (87,9%) housewife, (n=8) (3,7%) retired, (n=9) (4,2%) self-employed, (n=6) (2,8%) worker, (n=3) (1,4%) public officer; by the variable of father's profession as (n=37) (17,2%) housewife, (n=74) (34,4%) worker, (n=59) (27,4%) self-employed, (n=35) (16,3%) farmer, (n=10) (4,7%) public officer; by the term of employment in the current position as (n=43) (20,0%) 0-5 years, (n=43) (20,0%) 6-10 years,(n=48) (22,3%) 11-15 years, (n=34) (15,8%) 16-20 years, (n=19) (8,8%) 21-25 years, (n=12) (5,6%) 26-30 years, (n=7) (3,3%) 31-35 years,(n=9) (4,2%) 36 years and over; by the variable of total professional seniority as (n=29) (13,5%) 0-5 years, (n=36) (16,7%) 6-10 years, (n=56) (26,0%) 11-15 years, (n=39) (18,1%) 16-20 years, (n=22) (10,2%) 21-25 years, (n=20) (9,3%) 26-30 years, (n=7) (3,3%) 31-35 years, (n=6) (2,8%) 36 years and over.

Table 4.

Frequency Analysis of the Demographics of Respondents (cont.)

		Number	%
Number of employees in the department	0-10	56	26,0
	11-20	54	25,1
	21-30	20	9,3
	31-40	16	7,4
	41-50	34	15,8
	51-60	6	2,8
	61-100	18	8,4
	100+	11	5,1

The managers and employees are distributed according to the number of employees in their department as (n=56) (26,0%) 0-10 people, (n=54) (25,1%) 11-20 people, (n=20) (9,3%) 21-30 people, (n=16) (7,4%) 31-40 people, (n=34) (15,8%) 41-50 people, (n=6) (2,8%) 51-60 people, (n=18) (8,4%) 61-100 people, (n=11) (5,1%) 100 people and more.

Table 5.

Frequency Analysis of the Status of Education for the Current Position of Respondents

		Number	%
Received training for the current position	Received training	59	27,4
	Not received training	156	72,6
Place of training received for the current position	Course	2	0,9
	Public Educational Center	2	0,9
	Workplace	43	20,0
	High school	5	2,3
	University	7	3,3
	Not received training	156	72,6
Term of training received for the current position	0-5 months	41	19,1
	1 year	5	2,3
	2 years	2	0,9
	3 years and over	11	5,1
	Not received training	156	72,6
Perceived openness of the company they work into innovation	Open to innovation	74	34,4
	Not open to innovation	141	65,6
Reasons that the company they work in is open to innovation	Being informed about innovation	26	12,1
	Being open to new ideas	13	6,0
	Making improvement activities	5	2,3

	Technological innovation	4	1,9
	Workplace health and safety	13	6,0
	New machinery	10	4,7
	Innovations are being made	3	1,4
	No reason	141	65,6
Reasons that the company they work in is not open to innovation	Not being informed about innovation	4	1,9
	No information is shared at all	3	1,4
	No reason	208	96,7

The managers and employees are distributed by the variable of receiving training for their current position as (n=59) (27,4%) received training and (n=156) (72,6%) not received training; by the variable of place of training for their current position as (n=2) (0,9%) course, (n=2) (0,9%) Public Educational Center, (n=43) (20,0%) workplace, (n=5) (2,3%) high school, (n=7) (3,3%) university, and (n=156) (72,6%) not received training; by the variable of term of training for their current position as (n=41) (19,1%) 0-5 months, (n=5) (2,3%) 1 year, (n=2) (0,9%) 2 years, (n=11) (5,1%) 3 years and above, (n=156) (72,6%) not received training; by the variable of perceived openness of their company to innovation as (n=74) (34,4%) open to innovation, (n=141) (65,6%) not open to innovation; by the variable of reasons that the company is open to innovation as (n=26) (12,1%) being informed about innovation, (n=13) (6,0%) being open to new ideas, (n=5) (2,3%) improvement activities are being made, (n=4) (1,9%) technological innovation, (n=13) (6,0%) workplace health and safety, (n=10) (4,7%) new machinery, (n=3) (1,4%) innovations are being made, (n=141) (65,6%) no reason; and by the variable of reasons that the company is not open to innovation as (n=4) (1,9%) not being informed about innovation, (n=3) (1,4%) no information is shared at all, (n=208) (96,7%) no reason.

Table 6.

Individual Innovativeness Scale (BYÖ) Frequency Distribution

	Completely Disagree		Disagree		Neither Agree Nor Disagree		Agree		Completely Agree	
	n	%	n	%	N	%	n	%	n	%
My friends frequently seek my information and recommendation as I follow innovation.	22	10,2	35	16,3	55	25,6	60	**27,9**	43	20,0
I like trying new things.	29	13,5	19	8,8	30	14,0	68	31,6	69	**32,1**
I look for if there are new ways to do it while I am doing something.	25	11,6	19	8,8	36	16,7	72	**33,5**	63	29,3
I generally find new methods to solve problems.	21	9,8	17	7,9	51	23,7	67	**31,2**	59	27,4
I am skeptical of new perspectives and new inventions.	34	15,8	38	17,7	56	**26,0**	38	17,7	49	22,8
I do not adopt new ideas until I see people around me adopt them.	30	14,0	35	16,3	52	**24,2**	50	23,3	48	22,3
Table 6 (Con'd)										
I think I easily influence people in terms of innovation.	26	12,1	18	8,4	61	28,4	65	**30,2**	45	20,9
I think my opinions and behaviors are creative and authentic.	24	11,2	20	9,3	43	20,0	73	**34,0**	55	25,6
I think I am the last person to adopt innovation among people around me.	48	22,3	36	16,7	51	**23,7**	41	19,1	39	18,1
I think I am a creative person	34	15,8	18	8,4	53	24,7	65	**30,2**	45	20,9
I like being a leader to a group in terms of innovation.	26	12,1	26	12,1	59	**27,4**	56	26,0	48	22,3
I am reluctant to adopt innovation until I see it is helpful for people around me.	39	18,1	34	15,8	48	22,3	49	**22,8**	45	20,9
I think the old lifestyle and the old way of doing things is the best way.	51	**23,7**	33	15,3	37	17,2	49	22,8	45	20,9
I fight against problems and	25	11,6	22	10,2	40	18,6	65	**30,2**	63	29,3

ambiguity.										
Before taking innovation into account, I'd like to see other people use that innovation.	24	11,2	28	13,0	43	20,0	58	27,0	62	**28,8**
I am open to new ideas.	27	12,6	23	10,7	25	11,6	54	25,1	86	**40,0**
Unanswered questions lead me to find solutions.	17	7,9	18	8,4	41	19,1	64	29,8	75	**34,9**
I am skeptical of new ideas.	51	**23,7**	34	15,8	38	17,7	42	19,5	50	23,3

According to the data presented in Table 6, among the employees who participated in the questionnaire, 86 people (40,0%) ultimately agreed with the statement "I am open to new ideas"; 75 people (34.9%) ultimately agreed with "Unanswered questions lead me to find solutions"; 73 people (34,0%) completely agreed with "I think my thoughts and behaviors are creative and authentic"; 75 people (34,9%) completely agreed with "Unanswered questions lead me to find solutions"; 39 people (18,1%) completely agreed with "I think I am the last person to adopt innovation among people around me"; 43 people (20,0%) completely agreed with "My friends frequently seek my information and recommendation as I follow innovation".

5.2. Reliability Analysis Results for Main Dimensions

Reliability analysis was made for the questionnaire items used in this study. The Cronbach's Alpha test statistics were used for the reliability of questionnaire items. If the evaluation criterion used to evaluate the Cronbach's Alpha factor is $0,00 \leq \alpha < 0,40$, then the scale is unreliable. If it is $0,40 \leq \alpha < 0,60$, then the scale has low reliability. If it is $0,60 \leq \alpha < 0,80$, then the scale is highly reliable. If it is $0,80 \leq \alpha < 1,00$, the scale reliability is very high.

5.3. Individual Innovativeness Scale (IIS) Reliability Analysis

Table 7.

Individual Innovativeness Scale (IIS) Reliability Analysis

Reliability Analysis	
Cronbach's Alpha	N of Items
,834	18

The individual innovativeness scale's internal consistency factor was calculated. As a result of the analysis, Cronbach's alpha was calculated 0,834.

Table 8.

Results of the Reliability Analysis of the Items of the Individual Innovativeness Scale (IIS)

	Adjusted Item-Total Correlation	Cronbach's Alpha when the item is deleted
My friends frequently seek my information and recommendation as I follow innovation.	,508	,822
I like trying out new things.	,667	,812
I look for new ways of doing it while I am doing something.	,633	,815
I generally find new methods for solving problems.	,563	,819

Table 8 (Cont'd)

I am skeptical of new perspectives and new inventions.	,363	,829
I do not adopt new ideas until I see people around me adopt them.	,187	,838
I think I easily influence people in terms of innovation.	,481	,823
I think my thoughts and behaviors are creative and authentic.	,501	,822
I think I am the last person to adopt innovation among people around me.	,129	,841
I think I'm a creative person.	,523	,821
I like being a leader to a group in terms of innovation.	,493	,822
I am reluctant to adopt innovation until I see it is helpful for people around me.	,317	,831

I think the old lifestyle and old way of doing things is the best way.	,285	,834
I fight against problems and ambiguity.	,477	,823
Before taking innovation into account, I'd like to see other people use that innovation.	,450	,824
I am open to new ideas.	,471	,823
Unanswered questions lead me to find solutions.	,532	,820
I am skeptical of new ideas.	,199	,838

From Table 8, it can be seen that the Cronbach's Alpha (α) test statistics of all the scaled items are within the highly reliable thresholds. The internal consistency analysis was made for 18 items on the scale. As a result of the research, the scale's Cronbach's Alpha internal consistency factor was calculated as 83. Additionally, the correlations of all items with the total score are calculated. As can be seen in Table 7, the item-total correlations vary between 81 and 84.

5.4. Individual Innovativeness Levels of Managers and Employees in the Questionnaire

Table 9.

Distribution of IIS Mean Scores of Managers and Employees by Age

IIS	Age	n	Mean±sd	KW	P
Opinion Leadership	18-28	78	22,69± 6,36	6,465	0,091
	29-39	81	25,10±6,61		
	40-50	42	24,70 ±7,57		
	51+	14	24,88± 8,96		
Resistance to Change	18-28	78	19,57± 5,93 [ac]	**13,374**	**0,004***
	29-39	81	21,56±5,56 [bc]		
	40-50	42	22,38± 6,87		
	51+	14	26,61 ±7,64 [c]		
Risk-Taking	18-28	78	14,07± 4,51	3,695	0,296
	29-39	81	15,37 ±3,77		
	40-50	42	15,02± 5,41		
	51+	14	15,54±4,29		
IIS Total	18-28	78	56,58±12,39 [a]	**9,454**	**0,024***
	29-39	81	62,72± 11, 54		
	40-50	42	63,42± 15,05		
	51+	14	70,12± 12,51 [b]		

*Kruskal Wallis Test, p<0,05
** Mann Whitney U test*** a,b.c Post hoc Bonferroni, Different letters indicate a difference between groups.

In Table 9, the IIS score of managers and employees was compared with their individual and professional characteristics by age. There is a significant difference between the age of managers and employees and resistance to change and the IIS total score. The hypothesis was supported. In the dimension of resistance to vary in the Individual Innovativeness Scale, the mean scores of people aged 18-28 were lower than people aged 29-39, 40-50, and 51+. In the IIS total, the mean scores of people aged 29-39 were lower than people aged 18-28, 40-50, and 51+ ($p<0,05$). A significant difference was not identified between the age of managers and employees and opinion of leadership and risk-taking subdimension scores ($p>0,05$) (Table 9). Therefore, the hypotheses were not supported.

Table 10.

Comparison of IIS Mean Scores of Managers and Employees by Gender

IIS	Gender	n	Mean±sd	U	Z	P
Opinion Leadership	Female	27	23,47±5,04	1412,500	-1,086	0,277
	Male	188	24,11± 7,12			
Resistance to Change	Female	27	20,66±4,80	1690,000	-0,627	0,531
	Male	188	21,45 ±6,57			
Risk-Taking	Female	27	13,95±3,83	1531,000	-1,567	0,117
	Male	188	14,97±4,52			
IIS Total	Female	27	58,10±8,67	1001,000	-1,381	0,167
	Male	188	61,13 ±13,69			

*Kruskal Wallis Test, p<0,05
** Mann Whitney U test*** a,b.c Post hoc Bonferroni, Different letters indicate a difference between groups.

In Table 10, the IIS score of managers and employees was compared with their individual and professional characteristics by gender. A significant difference was not identified between the gender of managers and employees and the opinion leadership, resistance to change, risk-taking subdimension scores, and IIS total scores ($p>0,05$) (Table10).

Table 11.

Comparison of IIS Mean Scores of Managers and Employees by Marital Status

IIS	Marital status	n	Mean±sd	U	Z	P
Opinion Leadership	Single	82	23,12 ±6,36	**2736,500**	**-2,042**	**0,041****
	Married	133	24,68± 7,16			
Resistance to Change	Single	82	19,55± 5,05	**2607,000**	**-3,419**	**0,001****
	Married	133	22,52± 6,85			
Risk-Taking	Single	82	13,41 ±4,41	**2614,000**	**-3,872**	**0,000****
	Married	133	15,72± 4,24			
IIS Total	Single	82	56,86 ±12,52	**2609,000**	**-3,673**	**0,002****
	Married	133	63,46 ±12,93			

*Kruskal Wallis Test, p<0,05
** Mann Whitney U test*** a,b.c Post hoc Bonferroni, Different letters indicate a difference between groups.

In Table 11, the IIS score of managers and employees was compared with their individual and professional characteristics by their marital status. There is a significant difference between the marriage status of managers and employees and the opinion leadership, resistance to change, risk-taking subdimension scores, and IIS total scores. In addition, it was found out that in the Individual Innovativeness Scale opinion leadership, resistance to change, risk-taking subdimension scores, and IIS total score, the mean values of single people were lower than married people (p<0,05) (Table 11).

Table 12.

Distribution of IIS Mean Scores of Managers and Employees by Family Structure

IIS	Family Structure	n	Mean±sd	KW	p
Opinion Leadership	Nuclear family	156	31,83±7,46	**14,282**	**0,003***
	Extended family	43	35,88±6,26		
	Semi extended family	14	33,67±6,13		
	Fragmented family	2	41,42±12,12		
Resistance to Change	Nuclear family	156	33,04±7,19	5,320	0,150
	Extended family	43	35,42±8,56		
	Semi extended family	14	34,64±6,13		
	Fragmented family	2	40,83±12,96		
Risk-Taking	Nuclear family	156	31,79±8,51	**13,983**	**0,003***
	Extended family	43	37,20±8,81		
	Semi extended family	14	31,42±5,01		
	Fragmented family	2	35,00±21,21		
IIS Total	Nuclear family	156	54,62±5,33	5,899	0,117
	Extended family	43	56,81±3,25		
	Semi extended family	14	54,50±6,07		
	Fragmented family	2	56,00±8,48		

*Kruskal Wallis Test, p<0,05

** Mann Whitney U test*** a,b.c Post hoc Bonferroni, Different letters indicate a difference between groups.

In Table 12, the IIS scores of managers and employees were compared with their individual and professional characteristics by their family structure. There was a significant difference between the family structure of managers and employees and the Opinion Leadership and Risk-Taking subdimension scores. In addition, it was found out that nuclear families in opinion leadership and semi-extended family in risk-taking had lower mean scores than other family structures (p<0,05). However, a significant difference was not identified between the resistance to change subdimension score and IIS total score depending on the family structure of managers and employees (p>0,05) (Table 12).

Table 13.

Distribution of IIS Mean Scores of Managers and Employees by Educational Status

IIS	**Education**	**n**	**Mean±sd**	KW	P
Opinion Leadership	Primary	51	22,37±6,89	4,830	0,305
	High school	113	24,45±7,23		
	Associate's	26	25,22±5,43		
	Bachelor's	20	23,47±5,35		
	Graduate's	5	24,80±0,35		
Resistance to Change	Primary	51	22,26±6,43	8,159	0,086
	High school	113	20,82±6,42		
	Associate's	26	20,60±6,29		
	Bachelor's	20	21,62±5,85		
	Graduate's	5	28,50±1,00		
Risk-Taking	Primary	51	15,42±3,90	0,804	0,938
	High school	113	14,68±4,59		
	Associate's	26	14,69±4,60		
	Bachelor's	20	14,70±4,56		
	Graduate's	5	14,00±5,95		
IIS Total	Primary	51	60,03±10,97	6,669	0,154
	High school	113	60,27±14,81		
	Associate's	26	62,27±10,29		
	Bachelor's	20	58,71±9,52		
	Graduate's	5	74,25±6,65		

*Kruskal Wallis Test, p<0,05
** Mann Whitney U test*** a,b.c Post hoc Bonferroni, Different letters indicate a difference between groups.

In Table 13, the IIS score of managers and employees was compared to their individual and professional characteristics by their educational status. A significant difference was not determined between the academic status of managers and employees and the Opinion Leadership, Resistance to Change, Risk-Taking subdimension scores, and IIS total score (p>0,05) (Table 13).

Table 14.

Distribution of IIS Mean Scores of Managers and Employees by Title

IIS	Title	n	Mean±sd	KW	P
Opinion Leadership	Employee	195	32,83±7,56	0,597	0,742
	Manager	18	33,25±5,60		
	Senior Manager	2	30,71±1,01		
Resistance to Change	Employee	195	33,60±7,70	1,014	0,602
	Manager	18	34,90±5,58		
	Senior Manager	2	31,66±2,35		
Risk-Taking	Employee	195	32,80±8,85	0,489	0,783
	Manager	18	33,51±7,70		
	Senior Manager	2	35,00±7,07		
IIS Total	Employee	195	55,17±5,03	2,109	0,348
	Manager	18	54,22±5,99		
	Senior Manager	2	52,00±2,82		

*Kruskal Wallis Test, p<0,05
** Mann Whitney U test*** a,b.c Post hoc Bonferroni, Different letters indicate a difference between groups.

In Table 14, the IIS score of managers and employees is compared with their individual and professional characteristics by their positions. A significant difference was not obtained between the positions of managers and employees and the Opinion Leadership, Resistance to Change, Risk-Taking subdimension scores and IIS total score (p>0,05) (Table 17).

Table 15.

Distribution of IIS Means Scores of Managers and Employees by Their Term of Employment in the Current Position

IIS	How many years in the current position	n	Mean±sd	KW	P
Opinion Leadership	0-5	43	30,19±6,32	**14,273**	**0,047***
	6-10	43	33,28±7,67		
	11-15	48	33,33±6,83		
	16-20	34	33,57±8,42		
	21-25	19	35,48±6,00		
	26-30	12	33,57±8,47		
	31-35	7	35,71±10,59		
	36+	9	29,36±5,00		
Resistance to Change	0-5	43	31,74±7,32	9,309	0,231
	6-10	43	34,53±8,10		
	11-15	48	34,16±6,42		
	16-20	34	35,29±7,96		
	21-25	19	34,29±7,60		
	26-30	12	33,88±7,04		
	31-35	7	34,28±9,32		
	36+	9	28,51±6,94		
Risk-Taking	0-5	43	31,24±7,69	4,487	0,722
	6-10	43	33,02±10,33		
	11-15	48	33,61±7,55		
	16-20	34	33,33±9,46		
	21-25	19	33,33±8,31		
	26-30	12	35,00±8,81		
	31-35	7	34,28±12,42		
	36+	9	29,63±6,54		
IIS Total	0-5	43	54,06±5,15	4,605	0,708
	6-10	43	55,32±5,17		
	11-15	48	55,43±5,41		
	16-20	34	54,64±5,08		

	21-25	19	56,10±4,66
	26-30	12	55,75±5,42
	31-35	7	56,57±5,12
	36+	9	53,88±3,88

*Kruskal Wallis Test, p<0,05
** Mann Whitney U test*** a,b.c Post hoc Bonferroni, Different letters indicate a difference between groups.

In Table 15, the IIS score was compared with the individual and professional characteristics depending on the term of employment in the current position of the managers and employees. There was a significant difference between employment in the current position of managers and employees and the Opinion Leadership subdimension score. Those who have been serving for 36 years and longer in the current position had a lower mean score in Opinion Leadership than other employment terms (p<0,05). A significant difference was not identified between the Resistance to Change, Risk-Taking subdimension scores, and the IIS total score depending on how many years managers and employees have been in the current position (p>0,05) (Table 15).

Table 16.

Distribution of IIS Mean Scores of Managers and Employees by Their Total Professional Seniority

IIS	**Total Professional Seniority**	**n**	**Mean±sd**	KW	p
Opinion Leadership	0-5	29	31,13±7,49	10,813	0,147
	6-10	36	34,20±7,10		
	11-15	56	32,95±6,66		
	16-20	39	33,62±7,67		
	21-25	22	32,79±5,77		
	26-30	20	31,85±9,60		
	31-35	7	36,12±9,81		
	36+	6	26,66±4,30		
Resistance to Change	0-5	29	32,70±7,78	12,814	0,077
	6-10	36	35,09±8,57		
	11-15	56	34,25±6,09		
	16-20	39	35,21±6,66		
	21-25	22	32,04±7,41		
	26-30	20	32,41±8,92		
	31-35	7	33,57±9,73		
	36+	6	25,55±5,34		
Risk-Taking	0-5	29	33,21±7,63	3,462	0,839
	6-10	36	33,61±10,55		
	11-15	56	32,50±8,07		
	16-20	39	33,84±8,49		
	21-25	22	32,27±7,92		
	26-30	20	32,00±9,63		
	31-35	7	34,76±11,19		
	36+	6	27,22±7,72		
IIS Total	0-5	29	53,93±5,39	6,644	0,467
	6-10	36	55,66±3,92		
	11-15	56	55,35±5,90		
	16-20	39	55,05±5,14		

	21-25	22	55,00±5,14
	26-30	20	54,80±5,41
	31-35	7	57,42±4,72
	36+	6	52,66±2,16

*Kruskal Wallis Test, p<0,05** Mann Whitney U test*** a,b.c Post hoc Bonferroni, Different letters indicate a difference between groups.

In Table 16, the IIS score and the individual and professional characteristics were compared depending on the total professional seniority of managers and employees. A significant difference was not determined between the whole professional seniority of managers and employees and the Opinion Leadership, Resistance to Change, Risk-Taking subdimension scores and IIS total score (p>0,05) (Table 16).

Table 17.

Distribution of IIS Mean Scores of Managers and Employees by the Number of Employees in the Department

IIS	**Number of Employees in the Department**	**n**	**Mean±sd**	KW	p
Opinion Leadership	0-10	56	33,16±6,03	11,424	0,121
	11-20	54	32,19±5,98		
	21-30	20	32,14±7,98		
	31-40	16	32,23±8,57		
	41-50	34	31,26±9,66		
	51-60	6	33,57±7,75		
	61-100	18	34,60±9,12		
	100+	11	38,31±3,42		
Resistance to Change	0-10	56	33,18±6,66	7,787	0,352
	11-20	54	32,16±6,71		
	21-30	20	35,00±9,27		
	31-40	16	34,58±7,85		
	41-50	34	33,33±7,58		
	51-60	6	34,44±7,27		
	61-100	18	35,55±7,62		
	100+	11	37,87±10,38		
Risk-Taking	0-10	56	31,96±7,29	14,018	0,051
	11-20	54	32,96±8,5		
	21-30	20	35,33±9,32		
	31-40	16	30,20±10,07		
	41-50	34	30,39±9,20		
	51-60	6	31,66±7,22		
	61-100	18	38,51±9,71		
	100+	11	35,75±7,31		
IIS Total	0-10	56	56,08±4,18	5,902	0,551
	11-20	54	54,85±4,69		
	21-30	20	54,45±6,42		
	31-40	16	54,87±4,99		
	41-50	34	53,50±6,63		
	51-60	6	54,50±3,83		
	61-100	18	55,72±5,21		
	100+	11	56,36±3,38		

*Kruskal Wallis Test, p<0,05
** Mann Whitney U test*** a,b.c Post hoc Bonferroni, Different letters indicate a difference between groups.

In Table 17, the IIS score and individual and professional characteristics of the managers and employees were compared depending on the number of employees in their department. A significant difference was not detected between the number of employees in the department of managers and employees and the Opinion Leadership, Resistance to Change, Risk-Taking subdimension scores and the IIS total score (p>0,05) (Table 17).

Table 18.

Distribution of IIS Mean Scores of Managers and Employees by Their Financial Status

IIS	Financial Status	n	Mean±sd	KW	p
Opinion Leadership	Very good	10	34,14±6,11	2,703	0,609
	Good	31	31,61±7,90		
	Middle	117	33,38±7,41		
	Bad	40	32,67±7,21		
	Very bad	17	31,09±7,41		
Resistance to Change	Very good	10	34,83±8,36	3,482	0,481
	Good	31	34,40±6,79		
	Middle	117	33,83±7,78		
	Bad	40	32,45±7,77		
	Very bad	17	33,72±6,02		
Risk-Taking	Very good	10	35,33±7,40	1,770	0,778
	Good	31	32,04±8,72		
	Middle	117	33,04±8,61		
	Bad	40	32,91±9,61		
	Very bad	17	31,76±8,66		
IIS Total	Very good	10	54,70±3,26	**10,037**	**0,040***
	Good	31	53,45±5,34		
	Middle	117	55,34±5,21		
	Bad	40	56,45±4,79		
	Very bad	17	53,05±4,62		

*Kruskal Wallis Test, p<0,05
** Mann Whitney U test*** a,b.c Post hoc Bonferroni, Different letters indicate a difference between groups.

In Table 18, the IIS score and the individual and professional characteristics of the managers and employees were compared depending on their financial status. A significant difference was detected between the financial status of managers and employees and the IIS total score (p<0,05). In IIS total score, those with a terrible financial status had a lower mean score than other economic statuses. On the other hand, a significant difference was not obtained between the financial status of the managers and employees with the

Opinion Leadership, Resistance to Change, Risk-Taking subdimension scores (p>0,05) (Table 18).

Table 19.

Comparison of IIS Mean Scores of Managers and Employees Depending on Whether They Have Received Any Training For Their Current Position

IIS	Received Training For The Current Position	n	Mean±sd	U	Z	p
Opinion Leadership	Yes	59	35,45±8,27	4012,000	-1,451	0,147
	No	156	37,40±7,73			
Resistance to Change	Yes	59	23,42±4,59	4371,500	-0,568	0,570
	No	156	23,94±5,33			
Risk-Taking	Yes	59	12,03±5,59	3869,000	-1,805	0,071
	No	156	13,45±4,86			
IIS Total	Yes	59	54,03±5,59	3869,000	-1,805	0,071
	No	156	55,45±4,86			

*Kruskal Wallis Test, p<0,05
** Mann Whitney U test*** a,b.c Post hoc Bonferroni, Different letters indicate a difference between groups.

In Table 19, the IIS score and the individual and professional characteristics were compared depending on whether the managers and employees have received any training for their current position. A significant difference was not obtained between the status of receiving training for the current position and the Opinion Leadership, Resistance to Change, Risk-Taking subdimensions (p>0,05) (Table 19).

Table 20.

Distribution of IIS Mean Scores of Managers and Employees By The Place of Training Received for the Current Position

IIS	Place of Training Received For the Current Position	n	Mean±sd	KW	p
Opinion Leadership	Course	2	37,85±0,10	5,922	0,314
	Public Education Center	2	35,71±0,00		
	Workplace	43	31,13±0,88		
	High School	5	29,71±0,47		
	Universit	7	32,04±0,72		
	Not Received Training	156	33,36±0,70		
Resistance to Change	Course	2	35,00±0,70	2,402	0,791
	Public Education Center	2	36,66±0,00		
	Workplace	43	33,48±0,71		
	High School	5	31,66±0,23		
	Universit	7	30,47±0,69		
	Not Received Training	156	33,91±0,78		
Risk-Taking	Course	2	33,33±0,00	6,185	0,289
	Public Education Center	2	43,33±0,00		
	Workplace	43	32,32±0,89		
	High School	5	27,33±0,49		
	Universit	7	33,33±0,92		
	Not Received Training	156	33,05±0,87		
IIS Total	Course	2	57,50±3,53	8,644	0,124
	Public Education Center	2	58,00±0,00		
	Workplace	43	53,58±5,97		
	High School	5	52,00±3,74		
	Universit	7	56,14±4,74		
	Not Received Training	156	55,45±4,86		

*Kruskal Wallis Test, p<0,05
** Mann Whitney U test*** a,b.c Post hoc Bonferroni, Different letters indicate a difference between groups.

In Table 20, the IIS score and the individual and professional characteristics of the managers and employees were compared by the place of training received for the current position. A significant difference was not found between the location of education received by the managers and employees for their current position and the Leadership, Resistance to Change, Risk-Taking subdimension scores and the IIS total score (p>0,05) (Table 20).

Table 21.

Distribution of IIS Mean Scores of Managers and Employees by the Term of Training Received for Their Current Position

IIS	Term of Training Received for the Current Position	n	Mean±sd	KW	P
Opinion Leadership	0-5 months	41	31,46±0,82	5,996	0,199
	1 year	5	36,57±0,91		
	2 years	2	29,28±0,30		
	3 years and over	11	29,74±0,74		
	Not received training	156	33,36±0,70		
Resistance to Change	0-5 months	41	33,94±0,69	1,942	0,746
	1 year	5	32,33±0,73		
	2 years	2	29,16±10,60		
	3 years and over	11	31,21±0,49		
	Not received training	156	33,91±0,78		
Risk-Taking	0-5 months	41	32,84±0,91	1,957	0,744
	1 year	5	34,00±0,68		
	2 years	2	35,00±0,23		
	3 years and over	11	29,69±0,82		
	Not received training	156	33,05±0,87		
IIS Total	0-5 months	41	53,68±5,45	**10,850**	**0,028***
	1 year	5	59,80±5,76		
	2 years	2	55,50±0,70		
	3 years and over	11	52,45±5,41		
	Not received training	156	55,45±4,86		

*Kruskal Wallis Test, p<0,05
** Mann Whitney U test*** a,b.c Post hoc Bonferroni, Different letters indicate a difference between groups.

In Table 21, the IIS score and individual and professional characteristics of the managers and employees were compared depending on the training they received for their current position.

A significant difference was obtained between the term of training received for the current position of managers and employees and the IIS total score (p<0,05). In the IIS total score, those who received training for their current position for 3 years and longer had a lower score than other durations. However, a significant difference was not determined between the term of training received for the current position of managers and employees and the Opinion Leadership, Resistance to Change, Risk-Taking subdimension scores (p>0,05) (Table 21).

Table 22.

Comparison of IIS Mean Scores of Managers and Employees by the Perceived Openness of the Company to Innovation

IIS	Perceived Openness of the Company to Innovation	n	Mean±sd	U	Z	p
Opinion Leadership	Yes	74	37,51±8,80	4657,500	-1,292	0,196
	No	141	36,53±7,41			
Resistance to Change	Yes	74	24,78±5,07	**4283,000**	**-2,160**	**0,031****
	No	141	23,29±5,12			
Risk-Taking	Yes	74	12,72±5,96	5211,000	-0,014	0,989
	No	141	13,24±4,60			
IIS Total	Yes	74	54,72±5,96	5211,000	-0,014	0,989
	No	141	55,24±4,60			

*Kruskal Wallis Test, p<0,05
** Mann Whitney U test*** a,b.c Post hoc Bonferroni, Different letters indicate a difference between groups.

In Table 22, the IIS score and individual and professional characteristics of the managers and employees were compared depending on the perceived openness of their company to innovation. A significant difference was detected between the perceived transparency of the company of the managers and employees and the resistance to change subdimension score (p<0,05). Those who did not think their company was open to innovation had a lower mean score than those who believed the company was open to innovation. However, a significant difference was not detected between the perceived openness of the company to innovation and the Opinion Leadership, Risk-Taking subdimensions, and IIS total score (p>0,05) (Table 22).

Table 23.

Distribution of IIS Mean Scores of Managers and Employees by the Reasons Their Company Is Not Open to Innovation

IIS	Reasons Their Company Is Not Open To Innovation	n	Mean±sd	KW	p
Opinion Leadership	Not being informed enough	4	39,28±0,29		
	No information is shared at all	3	29,04±0,59	5,520	0,063
	Not received training	208	32,78±0,74		
Resistance to Change	Not being informed enough	4	33,33±0,23		
	No information is shared at all	3	28,33±0,72	1,517	0,468
	Not received training	208	33,78±0,75		
Risk-Taking	Not being informed enough	4	35,00±0,63		
	No information is shared at all	3	30,00±12,01	0,607	0,738
	Not received training	208	32,88±0,87		
IIS Total	Not being informed enough	4	62,50±3,78		
	No information is shared at all	3	57,00±10,00	**7,748**	**0,021***
	Not received training	208	54,89±5,05		

*Kruskal Wallis Test, p<0,05
** Mann Whitney U test*** a,b.c Post hoc Bonferroni, Different letters indicate a difference between groups.

In Table 23, the IIS scores and individual and professional characteristics of the managers and employees were compared depending on why the company is not open to innovation. A significant difference between the managers' and employees' reasons was not available to innovation and their IIS total score (p<0,05). The mean scores for the reasons that the managers and employees were not open to innovation were lower for the scores for other reasons. There was no significant difference between the managers and employees' company and employees not being open to innovation and the Opinion Leadership, Resistance to Change and Risk-Taking subdimension scores p>0,05) (Table 23).

Table 24.

Distribution of IIS Mean Scores by the Reasons the Company of Managers and Employees is Open to Innovation

IIS	**Reasons the Company is Open to Innovation**	**n**	**Mean±sd**	KW	p
Opinion Leadership	Being informed about innovation	26	31,97±6,87	6,797	0,450
	Being open to new ideas	13	36,48±5,90		
	Improvements are made	5	30,85±12,88		
	Technological innovation	4	35,71±0,23		
	Workplace health and safety	13	31,75±10,30		
	New machinery	10	34,71±11,83		
	Innovations are being made	3	29,52±0,43		
	Not received training	141	32,70±0,67		
Resistance to Change	Being informed about innovation	26	33,26±6,90	9,880	0,195
	Being open to new ideas	13	35,12±0,68		
	Improvements are made	5	32,00±10,69		
	Technological innovation	4	33,75±0,20		
	Workplace health and safety	13	37,56±0,70		
	New machinery	10	38,33±0,86		
	Innovations are being made	3	33,88±0,09		
	Not received training	141	33,01±0,75		
Risk-Taking	Being informed about innovation	26	31,79±0,69	9,847	0,197
	Being open to new ideas	13	35,64±0,86		
	Improvements are made	5	34,00±15,70		
	Technological innovation	4	25,00±0,57		
	Workplace health and safety	13	36,41±0,81		
	New machinery	10	36,00±10,15		
	Innovations are being made	3	30,00±0,88		
	Not received training	141	32,53±0,86		
IIS Total	Being informed about innovation	26	53,76±5,93	10,605	0,157
	Being open to new ideas	13	57,76±2,61		
	Improvements are made	5	54,20±8,22		
	Technological innovation	4	59,00±2,00		
	Workplace health and safety	13	52,46±7,12		
	New machinery	10	55,10±6,65		
	Innovations are being made	3	53,66±5,13		
	Not received training	141	55,24±4,60		

*Kruskal Wallis Test, p<0,05
** Mann Whitney U test
*** a,b.c Post hoc Bonferroni, Different letters indicate a difference between groups.

In Table 24, the IIS scores and individual and professional characteristics of the managers and employees were compared because the company they work in is open to innovation. No significant difference was determined between the reasons for the company of the managers and employees is available to innovation and the Opinion Leadership, Resistance to Change, Risk-Taking subdimension scores and the IIS total score (p>0,05) (Table 24).

Table 25.

Distribution of IIS Mean Scores by the Place Managers and Employees Spent the Majority of Their Lives

IIS	Place They Spent the Majority of Their Lives	n	Mean±sd	KW	p
Opinion Leadership	Village-Town	38	32,44±8,05		
	District	57	33,10±7,75	0,373	0,830
	Abroad	120	32,85±7,02		
Resistance to Change	Village-Town	38	34,03±7,40		
	District	57	35,64±7,16	**8,836**	**0,012***
	Abroad	120	32,66±7,57		
Risk-Taking	Village-Town	38	33,59±8,53		
	District	57	33,97±8,60	2,388	0,303
	Abroad	120	32,13±8,84		
IIS Total	Village-Town	38	55,10±5,83		
	District	57	54,03±4,96	3,585	0,168
	Abroad	120	55,54±4,89		

*Kruskal Wallis Test, p<0,05
** Mann Whitney U test
*** a,b.c Post hoc Bonferroni, Different letters indicate a difference between groups.

In Table 25, the IIS score and the individual and professional characteristics of the managers and employees are compared depending on where they spent the majority of their lives. A significant difference was detected between where the managers and employees spent most of their lives and the Resistance to Change score (p<0,05). It was found out that the mean scores of the managers and employees who spent most of their lives abroad had a lower score compared to other places. A significant difference was not detected between the place the managers and employees spent their lives and the Opinion Leadership and Risk-Taking subdimension scores, and the IIS total score (p>0,05) (Table 25).

Table 26.

Distribution of IIS Mean Scores of Managers and Employees by Their Caretakers in Their Childhood

IIS	Caretakers in Childhood	n	Mean±sd	KW	p
Opinion Leadership	Family	190	32,91±7,55	6,514	0,164
	Mother	15	34,66±5,85		
	Father	2	33,57±3,03		
	Mother's Parents	4	28,92±3,93		
	Father's Mother	4	26,78±5,00		
Resistance to Change	Family	190	33,66±7,56	4,035	0,401
	Mother	15	34,77±6,81		
	Father	2	36,66±4,71		
	Mother's Parents	4	35,83±7,51		
	Father's Mother	4	27,50±8,33		
Risk-Taking	Family	190	33,07±8,74	7,206	0,125
	Mother	15	34,00±8,47		
	Father	2	36,66±4,71		
	Mother's Parents	4	27,50±6,87		
	Father's Mother	4	23,33±6,66		
IIS Total	Family	190	55,05±5,19	1,297	0,862
	Mother	15	55,66±4,27		
	Father	2	56,00±8,48		
	Mother's Parents	4	52,25±5,73		
	Father's Mother	4	55,50±1,00		

*Kruskal Wallis Test, p<0,05
** Mann Whitney U test*** a,b.c Post hoc Bonferroni, Different letters indicate a difference between groups.

In Table 26, the IIS score and the individual and professional characteristics of the managers and employees were compared by their caretakers who took part in their childhood. A significant difference was not detected between the caretakers of the managers and employees in their childhood and the Opinion Leadership, Resistance to Change, Risk-Taking subdimension scores and the IIS total score (p>0,05) (Table 26)

Table 27.

Comparison of IIS Mean Scores of Managers and Employees by Living Status of Mother

IIS	Mother's Living Status	n	Mean±sd	U	Z	p
Opinion Leadership	Alive	196	36,69±7,82	1507,500	-1,373	0,170
	Dead	19	38,68±8,80			
Resistance to Change	Alive	196	23,61±4,96	**1289,500**	**-2,218**	**0,027****
	Dead	19	25,78±6,48			
Risk-Taking	Alive	196	13,08±5,09	1443,500	-1,626	0,104
	Dead	19	12,89±5,39			
IIS Total	Alive	196	55,08±5,09	1858,000	-0,015	0,988
	Dead	19	54,89±5,39			

*Kruskal Wallis Test, p<0,05
** Mann Whitney U test
*** a,b.c Post hoc Bonferroni, Different letters indicate a difference between groups.

In Table 27, the IIS score and individual and professional characteristics of the managers and employees were compared by whether their mothers are alive or not. A significant difference was detected between the living status of the mother of the managers and employees and the Resistance to Change subdimension score (p<0,05). In addition, the mean scores of the managers and employees whose mother was alive were lower than those whose mother was dead. However, a significant difference was not detected between the living status of the mother of the managers and employees and the Opinion Leadership, Risk-Taking subdimensions and IIS total (p>0,05) (Table 27).

Table 28.

Distribution of IIS Mean Scores of Managers and Employees by Educational Status of Mother

IIS	Mother's Educational Status	n	Mean±sd	KW	p
Opinion Leadership	Illiterate	41	32,82±5,94	2,698	0,609
	Literate	40	33,78±6,77		
	Primary school	93	32,90±7,81		
	Secondary school	36	32,22±8,53		
	University	5	29,14±6,27		
Resistance to Change	Illiterate	41	32,35±6,86	3,358	0,500
	Literate	40	34,16±6,70		
	Primary school	93	33,92±8,23		
	Secondary school	36	34,49±7,21		
	University	5	31,00±7,78		
Risk-Taking	Illiterate	41	33,41±8,34	4,470	0,346
	Literate	40	33,33±8,13		
	Primary school	93	33,08±9,36		
	Secondary school	36	32,40±7,91		
	University	5	24,66±8,69		
IIS Total	Illiterate	41	56,12±4,78	4,922	0,295
	Literate	40	56,05±4,81		
	Primary school	93	54,64±5,01		
	Secondary school	36	53,97±5,96		
	University	5	54,20±3,42		

*Kruskal Wallis Test, p<0,05
** Mann Whitney U test*** a,b.c Post hoc Bonferroni, Different letters indicate a difference between groups.

In Table 28, the IIS score and the individual and professional characteristics of the managers and employees by the educational status of their mothers. A significant difference was not detected between the academic level of the mothers of the managers and employees and the Opinion Leadership, Resistance to Change, Risk-Taking subdimension scores and the IIS total score (p>0,05) (Table 28).

Table 29.

Comparison of IIS Mean Scores of Managers and Employees by Living Status of Father

IIS	Living Status of Father	n	Mean±sd	U	Z	p
Opinion Leadership	Alive	159	35,70±7,98	**3124,500**	**-3,325**	**0,001****
	Dead	56	40,17±6,73			
Resistance to Change	Alive	159	23,25±5,13	**3604,500**	**-2,124**	**0,034****
	Dead	56	25,35±4,87			
Risk-Taking	Alive	159	12,44±5,21	**3045,500**	**-3,535**	**0,000****
	Dead	56	14,82±4,36			
IIS Total	Alive	159	54,44±5,21	**3334,500**	**-2,799**	**0,005****
	Dead	56	56,82±4,36			

*Kruskal Wallis Test, p<0,05
** Mann Whitney U test
*** a,b.c Post hoc Bonferroni, Different letters indicate a difference between groups.

In Table 29, the IIS score and the individual and professional characteristics of the managers and employees were compared by the living status of their fathers. A significant difference was detected between fathers' living status and employees and the Opinion Leadership, Resistance to Change, Risk-Taking subdimensions, and the IIS total score (p<0,05). In addition, the mean scores of the managers and employees whose father was alive were lower than those whose father was dead (Table 29).

Table 30.

Distribution of IIS Mean Scores of Managers and Employees by Father's Educational Status

IIS	Father's Educational Status	N	Mean±sd	KW	p
Opinion Leadership	Illiterate	16	31,07±6,62	6,150	0,188
	Literate	20	33,28±6,93		
	Primary school	112	32,56±7,25		
	Secondary school	60	33,31±7,80		
	University	7	36,32±8,91		
Resistance to Change	Illiterate	16	33,33±7,32	2,526	0,640
	Literate	20	33,75±7,43		
	Primary school	112	33,37±7,71		
	Secondary school	60	33,91±6,94		
	University	7	37,61±10,40		
Risk-Taking	Illiterate	16	31,04±8,66	4,879	0,300
	Literate	20	35,16±6,79		
	Primary school	112	32,56±9,08		
	Secondary school	60	32,61±8,41		
	University	7	338,09±9,97		
IIS Total	Illiterate	16	53,87±4,91	2,974	0,562
	Literate	20	55,90±4,87		
	Primary school	112	54,79±5,07		
	Secondary school	60	55,48±5,31		
	University	7	56,14±5,42		

*Kruskal Wallis Test, p<0,05 ** Mann Whitney U test*** a,b.c Post hoc Bonferroni, Different letters indicate a difference between groups.

In Table 30, the IIS score and the individual and professional characteristics of the managers and employees were compared by the educational status of their fathers. A significant difference was not detected between the academic level of the fathers of the managers and employees and the Opinion Leadership, Resistance to Change, Risk-Taking subdimension scores and the IIS total score (p>0,05) (Table 30).

Table 31.

Distribution of IIS Mean Scores of Managers and Employees by Father's Profession

IIS	Father's Profession	n	Mean±sd	KW	p
Opinion Leadership	Retired	37	34,55±7,98	**9,279**	**0,010***
	Worker	74	31,60±6,91		
	Self-employed	59	34,52±7,13		
	Farmer	35	**30,49±6,44**		
	Public officer	10	34,14±9,95		
Resistance to Change	Retired	37	35,94±7,00	**10,807**	**0,005***
	Worker	74	**31,53±7,92**		
	Self-employed	59	35,05±7,84		
	Farmer	35	33,23±5,73		
	Public officer	10	35,00±6,47		
Risk-Taking	Retired	37	35,58±8,71	**17,835**	**0,000***
	Worker	74	**29,55±9,02**		
	Self-employed	59	34,91±8,35		
	Farmer	35	33,71±7,08		
	Public officer	10	32,66±7,50		
IIS Total	Retired	37	55,45±6,14	1,797	0,407
	Worker	74	54,97±4,60		
	Self-employed	59	55,86±4,81		
	Farmer	35	53,37±5,24		
	Public officer	10	55,50±5,21		

*Kruskal Wallis Test, p<0,05
** Mann Whitney U test*** a,b.c Post hoc Bonferroni, Different letters indicate a difference between groups.

In Table 31, the IIS score of the managers and employees and their individual and professional characteristics were compared by the profession of their fathers. A significant difference was obtained between the father's profession of the managers and employees and the Opinion Leadership, Resistance to Change, Risk-Taking subdimensions (p<0,05). The mean scores of those whose father was a farmer were lower compared to those whose father was retired, a worker, self-employer, and a public officer, and the mean scores of those whose father was a worker were lower compared to those whose father was retired, self-employer, a farmer and a public officer. A significant

difference was not detected between the father's profession of the managers and employees and the IIS total score (p>0,05) (Table 31).

Table 32.

Distribution of IIS Scores of Managers and Employees by Mother's Profession

IIS	Mother's Profession	n	Mean±sd	KW	P
Opinion Leadership	Housewife	189	33,27±7,39	7,281	0,063
	Retired	8	33,75±6,65		
	Self-employed	9	29,20±5,76		
	Worker	6	27,14±5,19		
	Public officer	3	26,19±9,07		
Resistance to Change	Housewife	189	33,88±7,59	5,219	0,156
	Retired	8	35,41±7,00		
	Self-employed	9	28,51±6,68		
	Worker	6	34,16±5,45		
	Public officer	3	32,22±7,69		
Risk-Taking	Housewife	189	33,15±8,70	5,911	0,116
	Retired	8	37,08±10,30		
	Self-employed	9	27,77±7,45		
	Worker	6	31,11±4,55		
	Public officer	3	23,33±5,77		
IIS Total	Housewife	189	**55,32±5,09**	6,329	0,097
	Retired	8	**54,62±5,44**		
	Self-employed	9	**55,00±3,42**		
	Worker	6	**49,50±5,16**		
	Public officer	3	**51,33±2,88**		

*Kruskal Wallis Test, p<0,05
** Mann Whitney U test*** a,b.c Post hoc Bonferroni, Different letters indicate a difference between groups.

In Table 32, the IIS score and the individual and professional characteristics of the managers and employees were compared by their mothers' profession. The managers and employees IIS housewife total mean and standard deviation were 55,32±5,09, IIS self-employed mean and standard deviation were 55,00±3,42, the Resistance to Change retired dimension mean and standard deviation were 37,08±10,30, the Opinion Leadership retired dimension mean and standard deviation were 35,41±7,00, the Risk-Taking public officer mean and standard deviation were 26,19±9,07. A significant difference was not detected between the mother's profession of the managers and employees and the Opinion Leadership, Resistance to Change, Risk-Taking subdimension scores and IIS total score (p>0,05) (Table 32).

5.5. IIS Scale Total, Opinion Leadership, Resistance to Change and Risk-Taking Subscales Correlation Analyses

This chapter presents the means and standard deviations as well as the correlation analyses of the scales used in this study.

Table 33.

Distribution of Individuals' IIS Mean Scores

	Mean±sd	Median	Minimum	Maximum
Opinion Leadership	24,03 ±6,86	25,00	7	35
Resistance to Change	21,35 ±6,35	21,00	7	35
Risk-Taking	14,84 ±4,44	16,00	4	21
IIS Total	60,71± 13,13	61,50	23	90

The managers and employees Individual Innovativeness Scale Opinion Leadership dimension mean and standard deviation were 24,03 ±6,86, the median was 25,00, min.7, and max. 35; the Resistance to Change dimension mean and standard deviation were 21,35 ±6,35, median 21,00, min. 7, max. 35; the Risk-Taking dimension mean and standard deviation were 14,84 ±4,44, median 16,00, min. 4, max. 21; the IIS total mean and standard deviation 60,71± 13,13, median 61,50, min. 23, max. 90 (Table 33).

Table 34.

Individuals' Demographics IIS Scale Opinion Leadership Subscale Correlation

	Opinion Leadership	
	R	p
Age	0,193**	0,004
Marital status	0,146*	0,033
Family structure	0,201**	0,003
Father's living status	0,229**	0,001
Mother's profession	-0,198**	0,004

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

It can be understood from Table 34 that a positive and statistically significant correlation is present between the Individual Innovativeness Scale's subscale of Opinion Leadership and the age of managers and employees (r= 0.193, p<.01), marital status (r= 0.146, p<.01), family structure ((r= 0.201, p<.01), father's living status (r= 0.229, p<.01), and a negative and statistically significant difference between mother's profession (r= -0.198, p<.01). There is

a positive correlation between the managers' and employees' age, marital status, parents being separated, fathers' living status, and whether they exhibit Opinion Leadership and negatively correlate with the mother's working status (Table 34).

Table 35.

Individuals' Demographics IIS Scale Resistance to Change Subscale Correlation

	Resistance to Change	
	R	**P**
Age	0,149*	0,029
Marital status	0,179**	0,008
Family structure	0,138*	0,043
Number of employees in the department	0,144*	0,035
Father's living status	0,171*	0,012

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

It can be understood from Table 35 that there is a positive and statistically significant correlation between the Individual Innovativeness Scale's subscale of Resistance to Change and the managers' and employees' age (r= 0.149, p<.01), marital status (r= 0.179, p<.01), family structure (r= 0.138, p<.01), number of employees in the department (r= 0.144, p<.01) and father's living status (r= 0.171, p<.01) (Table 35).

Table 36.

Individuals' Demographics IIS Scale Risk-Taking Subscale Correlation

	Risk-Taking	
	R	**p**
Age	0,210**	0,002
Marital status	0,179**	0,008
Caretakers in childhood	-0,137*	0,045
Father's living status	0,246	0,000
Mother's profession	-0,153	0,025

It can be understood from Table 36 that there is a positive and statistically significant difference between the Individual Innovativeness Scale's subscale of Risk-Taking and the managers' and employees' age (r= 0.210, p<.01), marital status (r=0.179, p<.01), father's living status (r= 0.246, p<.01) and a negative and statistically significant difference with caretakers in childhood (r=-0.137, p<.01) and mother's profession (r=-0.153, p<.01) (Table 36).

Table 37.

Individuals' Demographics IIS Scale Total Correlation

	IIS Total	
	r	**p**
Gender	0,145*	0,033
Age	0,144*	0,035
Reasons the Company is not open to Innovation	-0,207**	0,002
Mother's educational status	-0,153	0,025
Father's living status	0,205	0,003
Mother's profession	-0,169*	0,013

It can be understood from Table 37 that there is a positive and statistically significant correlation between the Individual Innovativeness Scale's total and the employees' gender (r= 0.145, p<.01), age ((r= 0.144, p<.01), father's living status (r= 0.205, p<.01) and a negative and statistically significant difference with the reasons that the company is not open to innovation (r=-0.207, p<.01), mother's educational status ((r=-0.153, p<.01) and mother's profession (r=-0.169, p<.01) (Table 37).

CHAPTER 6

DISCUSSION

Certain theoretical studies in connection with human resources training have studied the impact of training activities on the improvement of innovation, technology, performance, motivation, employees' capabilities, entrepreneurship, and knowledge. In the literature, training is considered a blood vessel for a business. Enterprises that see training expenses as unnecessary costs have not established employee welfare and adapt to technological advancements. Furthermore, training allows employees to enhance their knowledge and skills and make them able to cope with uncertain conditions (Jeni, Momotaj & Al-Amin, 2021; Bircan, Gençler, 2015; Vaio & Varriale, 2018).

In the literature, some recent studies on the impact of Human Resources Management practices on performance. Certain scientific studies instead examined its financial outcomes. It is reported that innovation activities do not have a positive and significant impact on productivity. According to these scientists, a need for an approach will allow Human Resources Management practices to contribute to innovation with all their components (Simachev et al., 2021; Bowen et al., 2010; Rosenbusch et al., 2011; Laursen & Foss, 2003). This information is related to the limitations in studies. It is stated that innovation activities have differences in financial indicators (Zavyalova et al., 2018).

It is reported that employing highly trained employees in the business positive affects innovativeness performance, but in-company training activities can negatively impact innovation (Natalico et al. 2018). However, in our study, a

significant difference was not detected between the managers' and employees' educational status, receiving training for their current position and place of training received for their current position and innovation.

In another study, it can be seen that HR training has a positive impact on innovativeness, which positively affects the company performance. Thus, innovativeness has a mediator role in connecting training and performance (Capelleras, Domi, and Belletti, 2021).

In Gomezeli's study (2016), the importance of innovation for the business and regional competitive power and success was acknowledged by both the researchers and the practitioners.

Factor combinations that help companies' manager innovation were identified in demonstrating the road to implementing company policies that encourage innovation. Insufficient literature is a turning point in the innovation literature with organizational learning factors and different types of innovation (Poris-Ortiz, Devece- Caranana and Navarro- Garcia, 2018).

Human resources training positively affects the innovation performance of enterprises, and the implementation of training negatively smoothes out the studied correlation (Natalicchio, 2018).

Certain empirical studies examined the correlation between training offered to human resources and innovation levels and found out that training activities positively affected the innovation level (Profiroiu et al. 2019; Demirkan, Srinivasan,& Nand, 2018; Lousa, Rodrigues,& Pinto, 2020; Prem, 2019; Bircan, Gençler, 2015). On the other hand, some studies report findings on the contrary (Baark, 2016; Mark & Akhtar, 2003; Ding & Akhtar, 2001).

It was demonstrated that training and personnel development in human resources management practices had a positive impact on individual performance and innovative behavior (Eyüpoğlu & Kocaman, 2006; İspir & Yeşil, 2020). However, in our study, a significant difference was not detected between the managers' and employees' perceptions about the openness of their company to innovation, reasons the company is not open to innovation, and reasons the company is available to innovation and innovation.

In the literature, it can be seen that human resources training and innovation studies are carried out in the private sector. There are fewer studies in the public sector. In the literature, human resources management is diversified with different aspects and continues to be studied (Yılmaz 2009; Yiğit, 2010; Peçen, 2012; Eryiğit, 2013).

It can be suggested that enterprises realize more innovation in the field compared to other organizations. In our study, there was a significant difference between demographics and Opinion Leadership, Resistance to Change, Risk-Taking, and individual innovativeness in general. However, in our study, a significant difference was not determined between the managers' and employees' gender, educational status, positions, professional seniority, number of employees in the department, caretakers in childhood, mother's education, father's education, and mother's profession and innovativeness.

A significant difference was obtained between the managers' and employees' marital status, father's living status, and innovativeness which supported innovativeness.

A significant difference was detected between the Individual Innovativeness Scale by the managers' and employees' age, the Individual Innovativeness Scale scores by financial status, the Resistance to Change subdimension scores by the place where they spent the majority of their lives, and the Risk-Taking subdimension scores by father's profession, which supported innovativeness.

The findings from this study demonstrate that in terms of the impact of human resources training on innovativeness in enterprises operating in machinery and textile, it was found out that innovativeness is positively affected by the duration of training received for the current position of the managers and employees. In this respect, only training activities might not be sufficient. Therefore, senior management and enterprise owners must support innovative ideas and activities together with training. It is imperative to ensure that the innovative thoughts of employees are encouraged by the administration. Otherwise, it doesn't seem possible to generate innovative ideas and transfer them to production. It has become necessary to produce innovative products

that can meet constantly changing needs in line with the market demands quickly. These needs can only be met when the management encourages innovative thinking. R&D activities that are carried out with big budgets are also significant to create innovative ideas. Due to high costs, small enterprises cannot engage in research and development activities. By supporting innovative ideas, it is possible to produce current products at a higher quality with superior characteristics, present them in a new way with innovative technology and realize product innovation. Besides all that, big budgets and years of activities are required for R&D. As a result of these activities, however, it is possible to create innovative products that are hard to imitate. Despite companies that see training expenses as unnecessary costs, it has been understood today that it is necessary to lower personnel turnover rates and survive on today's global conditions. Therefore, training has become a requirement for innovative activities. All these facts will enhance human resources training activities for innovation in businesses.

CHAPTER 7
CONCLUSION AND RECOMMENDATIONS

7.1 Results

This study examined the impact of human resources training on innovativeness and, for this purpose, measured the perceived individual innovativeness of the respondents. It was determined that this measurement tool's total score and subscale scores have a high level of reliability. This study was carried out at enterprises operating in Machinery and Textile between September 1, 2017 – November 30, 2017.

Of the participants, 87,4% were male, 23,3% female, aged between 31-35, 61,9% were married, 52,6% high school graduate, 72,6% from nuclear family, 54,5% from middle income level, 55,8% spent the majority of their life abroad, 68,4% had their family as their caretakers in childhood, 91,2% mother was alive, 43,3% were primary school graduate, 74,0% father was alive, 52,1% father was primary school graduate, 87,9% mother was a housewife, 34,4% father was a worker, 90,7% was an employee, 22,3% were in their current position for 11-15 years, 26,0% had a total professional seniority between 11-15 years, 26,0% there were 0-10 persons in the department, 72,6% did not receive training for their current position, 20,0% received training for their current position in the workplace, 19,1% received training for their current position for 0-5 months, 65,6% the company was not open to innovation, and 96,7% reported that there is not a reason that their company is not open to innovation and 65,6% said that there is not a reason their company is open to innovation.

Of the managers and employees, 40,0% agreed with the Individual Innovativeness Scale items "I am open to new ideas", 34,9% completely

agreed with “Unanswered questions lead me to find solutions”, and 34,0% agreed with “I think my ideas and behaviors are creative and authentic”.

The Individual Innovativeness scale’s internal consistency factor Cronbach’s Alpha value was 0,834. Additionally, the correlations of 18 items of the Individual Innovativeness Scale with the total score were determined, and it was found out that the item-total correlations varied between .81 and .84.

Consumer habits have changed and led businesses to innovation activities. When companies correctly analyze needs and demands and realize innovation in this direction, they make positive progress, and when they continue to implement conventional methods, they make negative progress. Competition continues on an international, not a national, basis. Considering these conditions, it has become necessary to offer training and realize innovation to improve competitive power and progress. Enterprises need to monitor developments in their environment closely and rapidly adapt to these developments. It can be seen that the most crucial factor in their adaptation is realizing innovation activities. It was found out that the Individual Innovativeness Scale scores varied depending on the managers’ and employees’ age.
Depending on the marital status of the managers and employees, the Individual Innovativeness Scale Opinion Leadership, Resistance to Change, Risk-Taking subdimension scores had a significant difference.

With intensive competitive conditions in the international arena, improving the product-service quality, improving the adaptation rate to innovation, and lowering costs have become highly determinant factors. It should be noted that the survival of businesses in international competitive conditions depends on how fast they can respond to needs and demands and offer products and services. Businesses can only compete depending on the level they can internalize and support innovation activities. The technologies we have reached let us access information and see changes in a short time. It has been seen that we can only adapt to these changes and innovations and compete if we have trained and innovative human resources.

It is important to give support to managers and employees in businesses to improve their education about their field of operation. As a result, it is predicted to enhance innovation activities.

Innovativeness can be improved when managers act ethically, fairly, and encouraging towards their employees.

Researchers who are willing to conduct similar studies in this field are recommended to study qualitative public institutions. Because, although this study measures the individual innovativeness perception, it has limitations in explaining why and how. This study was not applied to public institutions. It is recommended to do further research on the innovativeness status in public institutions.

7.2 Recommendations

In this section, there are recommendations for the practitioners and researchers based on the outcomes of this study.

7.2.1 Recommendations for Practitioners

Considering the impact of human resources training offered in enterprises on innovation and its role in the development of managers and employees, managers need to implement human resources training more effectively. For this purpose, managers and employees need to receive human resources and innovation training and increase their awareness.

Because innovation efficiency improves with continuous human resources training, internal or external mentoring practices should be used actively to give innovation training to new and younger, inexperienced business managers, employees, and other directors and let them cope with problems.

Regarding the impact of human resources training on innovation, the pressure of constant internal and external inspection and workload on the managers and employees should be relieved. The psychological condition of managers and employees should not be overlooked.

Training should be offered to let managers and employees better understand the impact of human resources training on innovation. The training of business managers should be improved in the first place.

The physical and infrastructure needs of businesses should be met as soon as possible, and employees should be offered more alternatives about the departments they would like to work in. Additionally, meetings and various events should be organized to strengthen internal communication in enterprises.

Seminars should be organized to raise awareness about operations in managers and employees who are considered among the factors to improve human resources training on innovation. In this sense, various events should be organized for managers and employees on specific dates to let them blend with the business.

To further enhance the dignity of managers and employees, especially senior management and business owners should support managers and employees with their words and actions. Additionally, it is necessary to generate policies that would improve human resources training on innovation and resolve the lack of training. Furthermore, personnel policies should be reviewed in a way to bring more flexibility to enterprises.

It would be beneficial to employ new managers to be hired in departments to more easily succeed in human resources training and innovation, Considering the impact of managers' and employee's experiences and human resources training on innovation. In this sense, managers and employees should be transferred to more substantial departments after gaining experience for a while.

The impact of human resources training on innovation will be higher if managers and employees engage in activities for their own personal and professional development. In this framework, business managers should attend a certain number of scientific meetings in a year and visit enterprises in other countries.

Business managers should have a graduate degree. In addition to that, they should focus on foreign language skills to follow developments in the international arena.

In terms of personal traits, counseling departments should be used more efficiently to eliminate components that might negatively impact innovation about human resources training they receive.

7.2.2 Recommendations for Researchers

There is a minimal number of studies in the literature on the impact of human resources training on innovation. For this reason, in-depth studies on the effects of human resources training on innovation will increase awareness.

Considering its relations with positive organizational behaviors, human resources training, and innovation programs should be developed and implemented for managers and employees to make their business acquire a more efficient structure.

Quantitative studies can be carried out to demonstrate the impact of human resources training on innovation regarding each of the factors identified in the qualitative aspect of the study more clearly.

In addition to the contribution of human resources training and innovation to the organization, prospective individual contributions can also be studied.

Whether supervisors and senior management support innovative ideas generated as a result of human resources training can be studied.

Studies can be carried out to demonstrate the impact of human resources training and innovation on the business's problem-solving skills.

It is crucial to conduct theoretical studies to further develop the available human resources training and innovation knowledge in the literature considering the machinery and textile sectors.

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ANNEXES

NEAR EAST UNIVERSITY
INSTITUTE OF SOCIAL SCIENCES
DEPARTMENT OF BUSINESS ADMINISTRATION

QUESTIONNAIRE FORM

Dear respondent,

The following scale is related to a thesis study titled the Investigation of the Impact of Human Resources Training on Innovativeness which was carried out at the Department of Business Administration, Near East University. All collected data will be kept by the researcher and not be used for any other purpose. It is important for the reliability and validity of the study to answer all questions. Thank you for participating in this research and offering your support for our study.

Samet FINDIK

sametfindik34@gmail.com

1. What is your gender?

Female( ) Male( )

2. Age:.....

3. Marital status: Single( ) Married( ) Divorced( ) Widowed (spouse died) ( )

4. Family structure (type): Nuclear( ) Extended( ) Semi Extended( ) Fragmented( )

5. Educational background: Primary school ( ) High school( ) Associate's degree( ) Bachelor's degree( ) Graduate's degree (master or doctorate)( )

6. What is your title?: Employee( ) Manager( ) Senior Manager( )

7. How long have you been in your current position? .....

8. What are your total years of seniority? .....

10.How many personnel are employed in your department? …..

11. How can you describe your financial status?

Very good( ) Good( ) Middle( ) Bad( ) Very bad( )

12. Have you received any training for your current position? Yes( ) No( )

13. If yes, where and for how long did you receive training? .....

14. Do you think your company is open to innovation? Yes( ) No( )

15. If no, please explain briefly:

.....

16. If yes, what kind of actions are taken? (For example/ We are informed about innovations, we are open to new ideas, etc.)

……

17. Where have you spent the majority of your life? Village-Town( ) District( ) City( ) Abroad( )

18. Who were your caretakers in your childhood? .....

19. Mother. Alive( ) Dead( )

20. Mother's education: Illiterate( ) Literate( ) Primary( ) Secondary( ) University( )

21. Father's education: Illiterate ( ) Literate ( ) Primary ( ) Secondary ( ) University( )

22. Father. Alive( ) Dead( )

23. Father's occupation? .....

24. Mother's occupation? .....

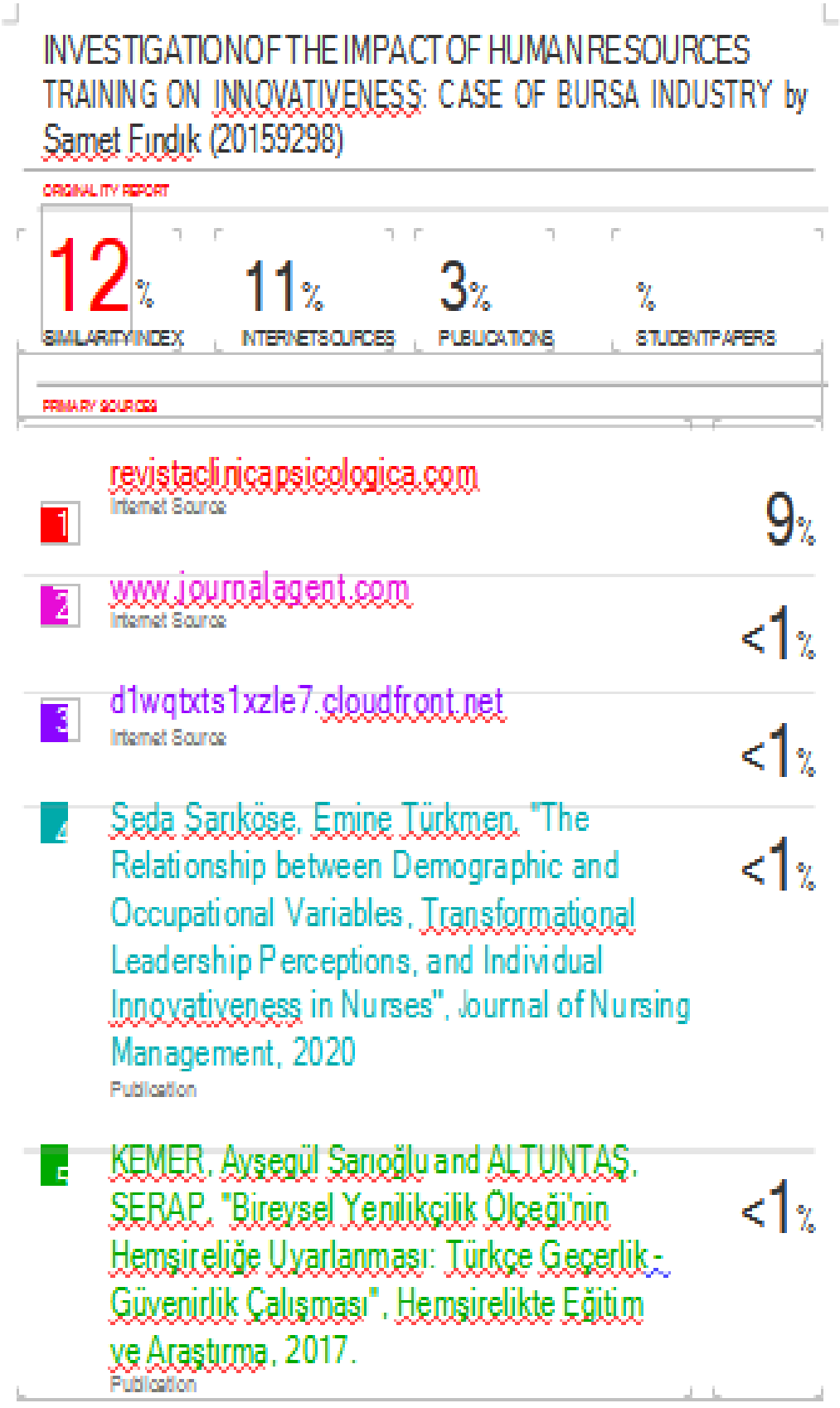
Individual Innovativeness Scale (IIS) **After reading each of the statements below, please tick the box on the same row in the respective column to express how much you agree with the idea.**	**Completely Agree**	**Agree**	**Neither Agree Nor Disagree**	**Disagree**	**Completely Disagree**
● My friends frequently seek my information and recommendation as I follow innovation.	5	4	3	2	1
● I like trying out new things.	5	4	3	2	1
● I look for new ways of doing it while I am doing something.	5	4	3	2	1
● I generally find new methods for solving problems.	5	4	3	2	1
● I am skeptical of new perspectives and new inventions.	5	4	3	2	1

● I do not adopt new ideas until I see people around me adopt them.	5	4	3	2	1
● I think I easily influence people in terms of innovation.	5	4	3	2	1
● I think my thoughts and behaviors are creative and authentic.	5	4	3	2	1
● I think I am the last person to adopt innovation among people around me.	5	4	3	2	1
● I think I'm a creative person.	5	4	3	2	1
● I like being a leader to a group in terms of innovation.	5	4	3	2	1
● I am reluctant to adopt innovation until I see it is helpful for people around me.	5	4	3	2	1
● I think the old lifestyle and old way of doing things is the best way.	5	4	3	2	1
● I fight against problems and ambiguity.	5	4	3	2	1
● Before taking innovation into account, I'd like to see other people use that innovation.	5	4	3	2	1
● I am open to new ideas.	5	4	3	2	1
● Unanswered questions lead me to find solutions.	5	4	3	2	1
● I am skeptical of new ideas.	5	4	3	2	1

BACKGROUND

Samet Fındık was born in Bursa in 1984. He graduated from Business Administration also Uludağ University Department of Mechanics. He completed his master's degree in the Department of Management and Organization. He published his work titled "Creating a New Innovation Model in Education and Increasing the Effectiveness of the Education System" during his doctorate at Far East University.

PLAGIARISM REPORT



INVESTIGATION OF THE IMPACT OF HUMAN RESOURCES TRAINING ON INNOVATIVENESS: CASE OF BURSA INDUSTRY by Samet Fındık (20159298)

ORIGINALITY REPORT

12%	11%	3%	%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	revistaclinicapsicologica.com Internet Source	9%
2	www.journalagent.com Internet Source	<1%
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4	Seda Sarıköse, Emine Türkmen, "The Relationship between Demographic and Occupational Variables, Transformational Leadership Perceptions, and Individual Innovativeness in Nurses", Journal of Nursing Management, 2020 Publication	<1%
5	KEMER, Ayşegül Sarıoğlu and ALTUNTAŞ, SERAP, "Bireysel Yenilikçilik Ölçeği'nin Hemşireliğe Uyarlanması: Türkçe Geçerlik-Güvenirlik Çalışması", Hemşirelikte Eğitim ve Araştırma, 2017. Publication	<1%

ETHICS COMMITTEE REPORT

NEAR EAST UNIVERSITY

SCIENTIFIC RESEARCH ETHICS COMMITTEE

22.11.2017

Dear Assoc. Prof. Dr. Nermin Gürhan,

The project recommendation titled "**Investigation of the Impact of Human Resources Training on Innovation**" with project number YDÜ/SB/2017/52 that you have submitted to the Scientific Research Ethics Committee has been reviewed by our committee and found ethically appropriate. With this paper, you can begin your studies provided you do not exceed the information you have provided on your form.

Asst. Prof. Dr. Direnç Kanol

Scientific Research Ethics Committee Reporter

Signature

Note: To submit an official letter of acceptance to an institution, you can apply with this paper to the Near East University Scientific Research Ethics Committee and obtain an official letter affixed with the signature of the chairperson of the committee.