

CONTENT ANALYSIS OF DOCTORAL DISSERTATIONS ON DIGITAL TRANSFORMATION IN TURKEY BETWEEN 2016-2024: TRENDS AND PROMINENT FINDINGS

2016-2024 YILLARI ARASINDA TÜRKİYE'DE DİJİTAL DÖNÜŞÜM KONULU DOKTORA TEZLERİNİN İÇERİK ANALİZİ: EĞİLİMLER VE ÖNE ÇIKAN BULGULAR

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ABSTRACT

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Digital transformation is a key concept for understanding the impact of technological innovations on businesses, public institutions, and individuals. It involves radically reshaping organizations business models, processes, and customer experiences using digital technologies. This transformation, impacting sectors such as finance, healthcare, and public services, is also expected to influence academic research. This study aims to examine and analyze 30 selected doctoral dissertations published between 2016 and 2024 in the National Thesis Center of the Council of Higher Education (YOK), which are open to access and include the variable of digital transformation concept. In the study, findings were obtained by using different methods of content analysis. The study was structured around the concept of digital transformation. In the study, data are collected by categorizing them as (i) publication years, (ii) purposes, (iii) affiliated institutes, (iv) languages of publication, (v) provinces of publication, (vi) sample groups, (vii) departments, (viii) data collection tools, (ix) data analysis methods and (x) reliability measures. Content analysis of 30 doctoral dissertations with this data collection method is important as it reveals the scope and depth of academic studies on digital transformation. The findings show a significant increase in digital transformation research since 2022, with a dominant focus in social sciences departments.

ÖZ

Dijital dönüşüm, teknolojik yeniliklerin işletmeler, kamu kurumları ve bireyler üzerindeki etkilerini anlamaya yönelik önemli bir kavramdır. Temelde, dijital teknolojiler kullanılarak kuruluşların iş modelleri, süreçleri ve müşteri deneyimlerinin yeniden şekillendirilme sürecidir. Finans, bankacılık, kamu hizmetleri, vb. her alanda önemli etkiler yaratan bu dönüşüm sürecinin akademik çalışmaları da etkilemesi beklenmektedir. Bu araştırma ile, YÖK Ulusal Tez Merkezinde, erişime açık, 2016-2024 yılları arasında yayımlanan, dijital dönüşüm kavramı değişkenini içeren, seçili 30 doktora tezini incelemek ve analiz etmek amaçlanmıştır. Çalışmada, içerik analizinin farklı yöntemleri (betimsel, kategorik) kullanarak bulgular elde edilmiştir. Çalışma, dijital dönüşüm kavramı çerçevesinde yapılandırılmıştır. Araştırmada veriler, (i) yayın yılları, (ii) amaçları, (iii) bağlı bulundukları enstitüler, (iv) yayınlandıkları diller, (v) yayınlandıkları iller, (vi) örneklem grupları, (vii) anabilim dalları, (viii) veri toplama araçları, (ix) veri analiz yöntemleri ve (x) güvenilirlik önlemleri şeklinde kategorilere ayrılarak toplanmaktadır. Bu veri toplama yöntemiyle 30 doktora tezinin içerik analizinin yapılması, dijital dönüşüm konusunda yapılan akademik çalışmaların kapsamını ve derinliğini ortaya koyması itibarıyla önem taşımaktadır. İncelenen doktora tezleri sonucunda, dijital dönüşüm konusundaki araştırma trendlerinin 2022 yılı itibarıyla belirgin bir artış gösterdiği ve tezlerin çoğunlukla Sosyal Bilimler Enstitüsü'ne bağlı anabilim dallarında gerçekleştirildiği görülmüştür. Bu bulgu, dijital dönüşüm alanında sosyal bilimlerin daha baskın bir rol oynadığını ortaya koymaktadır.

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Introduction

The digital transformation process started with the developments in information technologies and production systems that emerged in the last quarter of the 1900s. This process, together with the digitization of information, accelerated the transition to cyber-physical systems, referred to as the fourth stage of the industrial revolution in the 2000s, and brought about the transition to systems that connect the physical world to the virtual computing world. Thus, the digital transformation process was initiated (LaBerge et al., 2020: 2). With the acceleration of digitalization in the 2000s, the integration of technology into business processes accelerated and traditional methods of doing business were replaced by more efficient, fast and flexible methods (Bresciani, et al., 2019; Scuotto, et al., 2019). Digital technologies (robots, intelligent systems, mobile communications, etc.) have been cultivated in a wide range of fields, leading to major changes in various sectors affecting society (Plekhanov et al., 2022). The foundation of this change and transformation lies in the opportunities provided by technology to perform tasks more quickly, efficiently, and cost-effectively, as well as in the ability to instantly record, rapidly process, transmit, and utilize information in decision-making processes (Karagözoğlu, 2016: 88).

Today, digital transformation is not a concept that is defined very often in the literature. Looking at the definitions, digital transformation has been described as a social phenomenon (Stolterman et al., 2004), a cultural evolution (Belk, 2013; Pardo et al., 2014; Rogers et al., 2011; Pinzaru et al., 2012) and a business model for companies (Zhu et al, 2020 ; Rogers et al., 2011 ; Kohli et al., 2011 ; Liu, 2012 ; Gastaldi et al., 2012 ; Berman, 2012 ; Medina et al., 2013 ; Barland, 2013 ; Rothmann et al., 2014 ; Oiestad et al., 2014 ; Pardo et al., 2014). In its broadest definition, digital transformation encompasses fundamental changes in society and industries (changing ways of doing business, evolving business models, telecommuting and education, changing societal values and cultural norms, etc.) through the use of high-level, digital Technologies (Agarwal et al., 2010; Majchrzak et al., 2016).

Digital transformation, which brings about changes in individuals, business processes, and technology, is also observed to have an impact on the academic environment (Gümüsoğlu, 2017: 37). With digital transformation, traditional forms of communication are evolving, and both the speed and scope of communication are increasing. The digitalization of information and communication processes enhances academics' and students' access to information and resources. The use of information technology for academic purposes and the proliferation of collaboration tools increase collaboration in the academic environment. In addition, digitalization has created a potential that eliminates the limited spatial structure of academic work. Thus, many activities in academia have become suitable to be carried out in different places and times (Kaytan & Doğan, 2023: 469-470). However, digital transformation, which has been researched by many different academics or experts in many different fields such as engineering, economic administrative sciences, social sciences or fine arts, has been one of the topics frequently researched by doctoral students in recent years (Özispä & Akdaş, 2019: 62). In this context, the present study aims to examine doctoral dissertations on digital transformation in universities across various categories. For this purpose, the theses (doctoral dissertations) scanned in the YOK national thesis center database were examined based on the categories of publication years, purposes, provinces of publication, institutes they are affiliated with, languages of publication, provinces of publication, sample groups, departments, data collection tools, data analysis methods and reliability measures.

Digital Transformation and Related Literature Review

Digital transformation brings about changes in a wide range of areas, from the way individuals live their lives to the way organizations do business, from economic and social ecosystems to entire social structures. The complexity and interdisciplinary nature of the digital transformation process creates a holistic transformation process in which technological developments are intertwined with economic, social, cultural and political dimensions (Appio et al., 2021: 4). The digital innovations that come with digital transformation are not only making superficial improvements, but also radically transforming the way organizations operate, their culture and strategic approach (Baptista et al., 2020: 5).

Digital transformation is a worldwide hot topic of great importance for all companies in all industries, as it changes the concept of value creation, customer relationships and internal processes. Digital transformation is one of the latest manifestations of the different changes taking place in today's world. Therefore, researchers and experts are closely examining this new concept, trying to identify its effects, benefits, shortcomings and consequences on both social practices and the workforce (Zaoui & Soussi, 2020: 622).

By innovating and enhancing existing practices, digital transformation has the potential to increase productivity, create value and improve social welfare (Ebert & Duarte, 2018: 16). Digital transformation is a critical element for firms to gain competitive advantage and achieve sustainable growth. By renewing their internal and external strategies, companies can maximize the commercial benefits of digital transformation (Westerman & Bonnet, 2015; Reis et al., 2018: 411). However, as digital transformation transforms competition and entrepreneurial models, organizations need to overcome new challenges to succeed in this new environment. Tackling these challenges involves strategic planning, flexibility, digital skills development, financial investments, etc. (Crupi et al., 2022).

A review of the literature defining the concept of digital transformation reveals that definitions vary depending on perspectives and perceptions. Liu et al. (2011: 1728) define digital transformation as the integration of digital technologies into business processes, while Lucas et al. (2013: 372) define it as the redefinition of the capabilities, processes and relationships that a business already has by completely changing the traditional way of doing business. Piccini et al. (2015: 1635) argue that digital transformation requires the integration of information, communication and connectivity technologies such as social media, mobile devices, analytics and cloud computing, and that this integration creates more efficient, effective and competitive processes in businesses. The definition of Haffke et al. (2016: 2) reveals that digital transformation has the potential to provide businesses with competitive advantage and that this process requires strategic management. In this way, digital transformation helps businesses achieve their goals of sustainable growth and innovation. On the other hand, Schwertner (2017: 388) emphasizes that digital transformation is not only a technological change, but also the organizational structure, processes and culture must adapt to this change. Similarly, Vial (2019: 130) states that digital transformation is not only about updating technology, but also requires fundamental changes in the deep structures of the organization. Finally, Akyürek (2021: 53) explained digital transformation as *“the holistic transformation realized in human business models and processes and technology by producing more economical, effective and efficient products and services than its competitors in order to ensure customer satisfaction by taking advantage of the opportunities offered by newly developing technologies in line with changing demands and needs”*.

In a nutshell, digital transformation is a widely accepted concept, driven by innovative, digital technologies that fundamentally change organizations' business models (Zhang & Chen, 2024, 1484). In other words, when the definitions of the concept of digital transformation are examined, it is seen that the individual, process and technology are generally emphasized. The relationship between the individual and technology enables work to be done differently, and the relationship between technology and process enables processes to be done faster. With the support of technology, it has become possible to identify new needs, make the right decisions and operate efficient processes by collecting, analyzing and transferring a large amount of data to different areas.

In the literature, previous studies provide deeper knowledge and insights by analyzing the various dimensions and impacts of digital transformation (Henriette et al., 2016; Reis et al., 2018; Verhoef et al. 2021; Zhu et al. 2020). In their qualitative study, Henriette et al. (2016) conducted a systematic literature review to clarify the concept and dimensions of digital transformation. Gebayew et al. (2018: 263) reviewed studies on digital transformation in the literature and emphasized that organizations need to change their business plans or policies to a new digital business model in order to achieve their goals. Reis et al. (2018: 419) provide an overview of the literature by conducting a systematic review of 206 articles. Vial (2019: 118) developed a conceptual definition of digital transformation from the 282 articles he analyzed and proposed a 7-point guideline on how the concept should be defined. Dittes and Smolnik (2019: 1215) investigated the extent to which businesses utilize social media platforms to transform into a digital work environment and improve employee performance. Nasiri et al. (2020: 96) stated that supply chain firms are developing their digital transformation journeys with smart technologies in order to achieve the desired performance. In their study, Parida et al. (2019: 1) aimed to develop a framework that connects and communicates digitalization, business model innovation and sustainability in industrial settings and sets directions for future research. Mergel et al. (2019: 1), in their study, examined the digital transformation phenomenon in the public sector and created a conceptual framework derived from expert opinions. In their study, Özcan and Keskin (2020: 2214) tried to develop a general perspective to evaluate the social impacts of digital transformation. Ghobakhloo (2020: 1) emphasized in his study that the digital revolution has fundamentally reshaped the way individuals live and work. Abou Foul et al. (2020: 975), in their study, provide some insights for managers to better understand the digital transformation in the service process. They also emphasized that these results have important theoretical implications for the service literature. Zhu et al.

(2020: 511) examined the studies on digital transformation between 2000-2020 by applying various bibliometric and visual analysis methods. In order to better understand the digital transformation process, Verhoef et al. (2021: 889) identified three main stages of the process (digitization, digitalization and digital transformation) using existing literature. Similarly, Sezen and Şenarar (2022, p. 57) conducted a literature review to clarify the concepts of digitization, digitalization and digital transformation, highlighting their distinctions and emphasizing the significance of transformation for both the economy and society. Blanka et al. (2022: 1) emphasize that human resources and employee competence have a critical importance in the digital transformation process. Dong (2023: 11) conducted a comprehensive literature review synthesizing the best practices of digital transformation management and research findings in the field. Büyükkada (2024: 1) evaluated the use of artificial intelligence in academic literature from an ethical perspective and found that although the progress brought by artificial intelligence offers useful opportunities to researchers, if not managed carefully in terms of ethics and reliability, it can cause the researcher to move away from the original nature of the researcher. Erdem (2024: 218), in his study on the benefits of artificial intelligence in the field of social sciences and the problems that may arise due to its use, emphasizes that these applications can create problems by replacing human thinking and decision-making mechanisms, along with the finding that artificial intelligence applications add speed to studies and reduce workload.

Purpose and Methodology of the Research

The aim of this study is to evaluate and analyze the doctoral dissertations published in Turkey between 2016 and 2024 on digital transformation and related variables. There are several important reasons for focusing on doctoral dissertations. First, doctoral dissertations represent the most in-depth and comprehensive studies of the academic literature. They often contain more advanced research, methodological depth and original contributions on various dimensions of the topic. In addition, doctoral theses are often the most cited studies by the academic and professional communities, allowing for a better understanding of trends and key findings in the field (Turan et al., 2018: 30; Davulcu & Mazıcı, 2018: 57; Gülmez, et al., 2019: 60).

Since the survey was launched in July 2024, all data for 2024 are not included. In the historical process, it is seen that doctoral dissertations on digital transformation started to be written in 2016. From this point of view, doctoral dissertations between 2016 and 2024 were taken into consideration.

In line with the stated main purpose, the problem statement of this study is determined as “What is the trend of doctoral dissertations published on digital transformation in Turkey?”. Within the framework of the main problem, answers to the following sub-problems are sought:

- 1- What is the distribution of doctoral dissertations by year?
2. How is the distribution of doctoral theses according to their purposes?
- 3- How are the doctoral dissertations distributed according to their affiliated institutes?
- 4- What is the distribution of doctoral dissertations by publication language?
- 5- How are the doctoral dissertations distributed according to the provinces in which they were published?
- 6- What is the distribution of doctoral dissertations based on the characteristics of their sample groups?
- 7- How are the doctoral dissertations distributed by main fields of study?
- 8- What is the distribution of doctoral dissertations according to the data collection tools used?
- 9- How are the doctoral dissertations distributed according to the data analysis methods used?
- 10- How is the distribution of doctoral dissertations according to the reliability measures used?

In this study, descriptive and categorical content analysis method is used. Content analysis is the analysis of any recorded form of communication (books, magazines, etc., all kinds of written texts, television programs, public documents, newspapers, articles, textbooks, novels) focuses on its content. Content analysis is a method used to identify the presence of specific words, themes or concepts in texts, to interpret the meaning of these elements and to examine the relationships between them (Gül & Nizam, 2021: 182). Descriptive content analysis is the descriptive evaluation of all studies, published or unpublished, on a given topic. In addition, descriptive content analysis provides a comprehensive summary of the studies conducted in the relevant field by evaluating the research results in a systematic and objective manner (Ültay et al., 2021: 190). Categorical content analysis, on the other hand, is a statistical, systematic analysis conducted in order to evaluate study problems according to specified categories and to define the results of research (Çelik, 2023: 330). As a result of the descriptive and categorical content analysis, this study focuses on how the variable

of digital transformation is handled in doctoral dissertations published in the YOK National Thesis Center between 2016 and 2024.

The study has several limitations. The first one is the small number of doctoral dissertations analyzed. The fact that only 30 theses were analyzed may be limited in reflecting general trends. A second limitation is that this study only examined doctoral dissertations that are available in the YOK National Thesis Center. By using only the YOK National Thesis Center, this research provides a limited data source to cover all theses on digital transformation in Turkey. Studies in other universities' databases or printed theses were excluded.

Data Collection and Analysis

The data source of the research consists of 30 doctoral dissertations registered in the YOK National Thesis Center between the years 2016-2024, including the topic of digital transformation. The YOK National Thesis Center is a significant official repository that collects theses published by higher education institutions in Turkey. It provides researchers with easy access through its digital platform and serves as a central source encompassing theses from universities across the country. For these reasons, YOK National Thesis Center was chosen as the most appropriate and comprehensive data source for examining academic studies on digital transformation. Other sources may only cover theses from specific universities or institutions, which can be limiting in terms of seeing general trends (Ateş, 2023: 309).

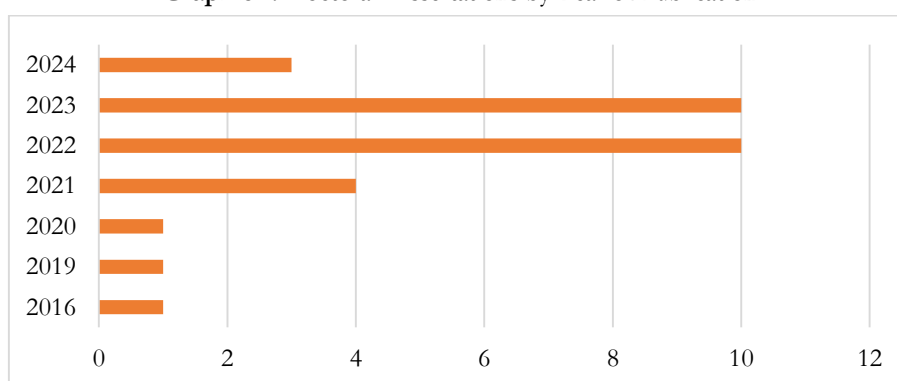
In the doctoral dissertations examined in this study, the concept of digital transformation was selected as the focus. The selection criteria included the titles and keywords of the dissertations, the type of thesis, and their availability for public access. In this context, publicly accessible doctoral dissertations with the words “digital transformation” in their thesis titles and keywords were examined.

The 30 doctoral dissertations obtained were analyzed and transcribed by the author through Microsoft Office Word and Microsoft Office Excel programs. In the light of the established criteria, tables were organized by separating the categories appropriate to the content analysis questions in the study. Categories were created in line with the characteristics of descriptive and categorical content analysis methods. These categories were determined as publication years, purposes, affiliated institutes, languages in which they were published, provinces in which they were published, sample groups, departments, data collection tools, data analysis methods and reliability measures.

Findings of the Research

The doctoral dissertations included in the scope are shown in Graphic 1 according to the year of publication.

Graphic 1. Doctoral Dissertations by Year of Publication



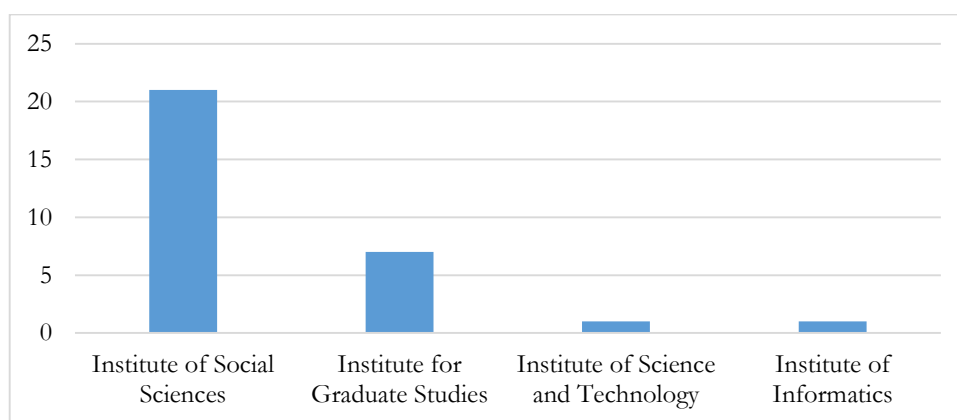
Note. As seen in Graphic 1, a total of 30 doctoral dissertations were identified in the YOK national thesis center database. One doctoral dissertation was published in 2016, 2019 and 2020. Since there were no doctoral dissertations published on digital transformation in 2017 and 2018 in the database scanned within the scope of the study, these years are not shown in Graphic 1. According to the observed trend, there has been a significant increase in the number of doctoral dissertations published, especially since 2021. In other words, it is seen that the analyzed doctoral dissertations correspond to 81% with a total of 24 publications between 2021-2023. It seems possible to point to the Covid 19 pandemic and artificial intelligence

technologies as the reason for this rise. With the Covid 19 pandemic, remote working, online shopping and digital services becoming mandatory have accelerated digital transformation processes. In addition, the integration of artificial intelligence technologies into business processes has been an important step in the advancement of digital transformation (Shi et al., 2022: 2). In other words, the pandemic process has made it imperative for businesses to accelerate their digital transformation and transition to a more sustainable and resilient business model. This process has revealed that digitalization is not only a choice, but also a necessity. The popularity of the concept during these periods was also reflected in academic life. In 2024, three doctoral dissertations have been published so far and have a share of 10%. Since 2024 has not yet been completed, it should not be overlooked that these figures may increase.

Tablo 1. Purposes of Doctoral Dissertations

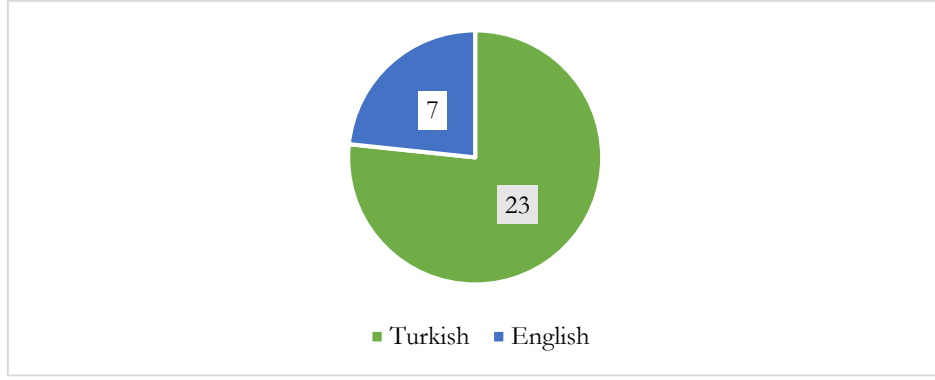
Categories	f	%
Digital Transformation and Technology Adaptation and Sectoral Technology Applications	13	44%
Logistics and Transportation	2	7%
Digital Strategies and Performance	5	16%
Organizational Change and Culture	5	16%
Entrepreneurship and Innovation	2	7%
New Technologies and Blockchain Applications	3	10%

From Table 1, it is understood that doctoral theses are concentrated in the field of digital transformation and technology adaptation. This shows the importance of evaluating digital transformation in each sector separately and that sectoral technology adaptation has become a critical issue for businesses. It should be noted that studies to understand the effects of the digital transformation process in different sectors, to explore the challenges and opportunities in this process, and to create new business models are highly preferred.



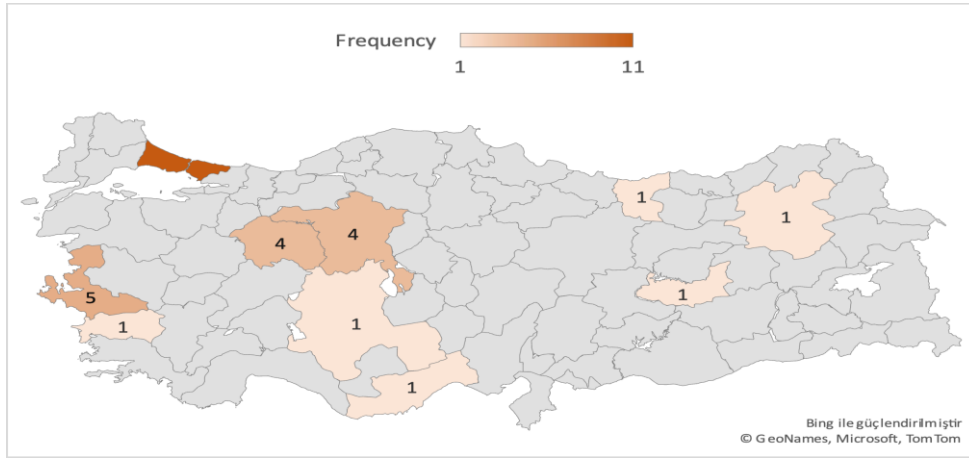
Graphic 2. Doctoral Dissertations by Institutes of Publication

Note. In Graphic 2, when the 30 doctoral dissertations within the scope of the research are analyzed according to the institutes in which they were published, it is noteworthy that 21 of them were specifically studied in the field of social sciences. Based on the idea that digital transformation has significantly affected individual and social life, it is understood that the field of social sciences offers a suitable framework for understanding and analyzing these effects.



Graphic 3. Doctoral Dissertations According to Languages of Publication

Note. In Graphic 3, when the publication languages of doctoral dissertations published on digital transformation are analyzed, it is determined that two languages are used in total. Since the sources were obtained from the YOK National Thesis Center, Turkish stands out as the most used language.



Graphic 4. Provinces of Doctoral Dissertations

Note. Upon examining Graphic 4, it is observed that the majority (37%) of doctoral dissertations addressing the concept of digital transformation have emerged from universities in Istanbul. This rate is followed by Izmir with 17%. The fact that Istanbul and Izmir are the leading centers of industry and technology in Turkey and that academic events, conferences, seminars, etc. are organized more in these cities may not allow researchers to exchange information and ideas in the field of digital transformation and increase academic production in this field.

The doctoral dissertations are shown in Table 2 according to the sample groups in which they were conducted:

Table 2. Sample Groups

Categories	f	%
Business Employees and/or Managers	15	50%
Article Data	5	17%
Company Data	3	10%
Sector Experts	3	10%
Certified Public Accountant	1	3%
Journalists as Individual Entrepreneurs	1	3%
Unspecified	1	3%
Hospital Employees	1	3%

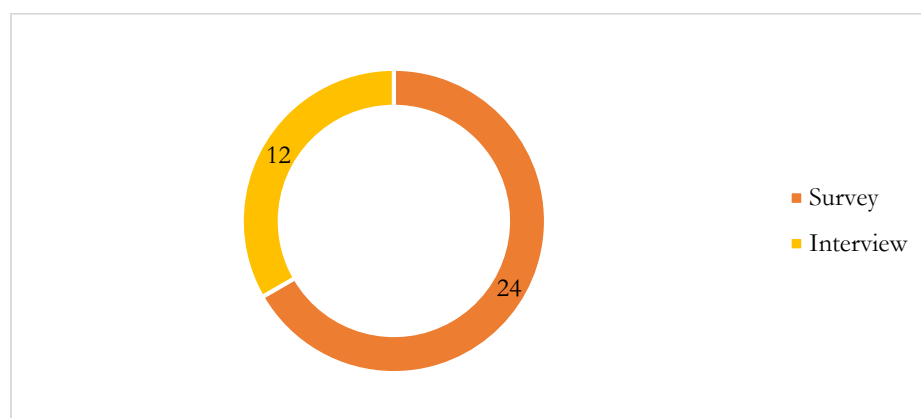
Note. According to Table 2, 15 out of 30 doctoral dissertations (50%) were conducted with sample groups consisting of business employees and/or managers. The reasons for scaling the concept of digital transformation with sample groups consisting of business employees and / or managers can be listed as the fact that the majority of studies have been conducted in the field of social sciences, especially in business and management. The ease of access for researchers and the idea of providing richer data through different departments and positions can play an important role in the selection of the sample group. This was followed by article data with 17% and company data and interviews with sector experts with 10%.

The distribution of the doctoral dissertations within the scope of the research according to the relevant departments is shown in Table 3 as follows:

Table 3. Departments

Categories	f	%
Business Administration	9	34%
Tourism Management	4	13%
Public Relations and Publicity	2	7%
Engineering Management	2	7%
Finance	1	3%
General Journalism	1	3%
Banking and Finance	1	3%
Industrial Policies and Technology Management	1	3%
Communication Design and Management	1	3%
Management and Strategy	1	3%
Public Law	1	3%
Science and Technology Policy Studies	1	3%
Business Management	1	3%
Technology and Information Management	1	3%
Management Engineering	1	3%
Management Information Systems	1	3%
Maritime Transportation and Management Engineering	1	3%

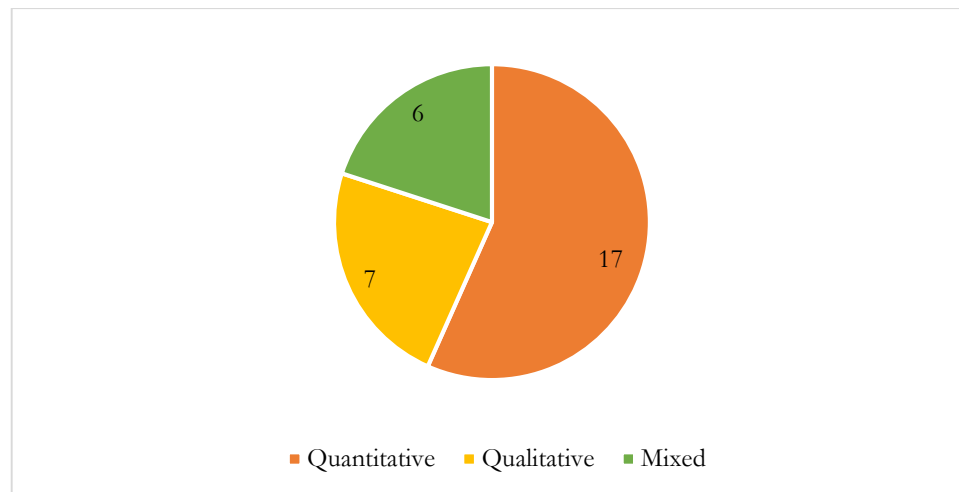
Note. When Table 3 is analyzed, it is seen that the majority (34%) of these doctoral dissertations were written in the department of business administration. The intensive research of the concept of digital transformation in business administration reflects the wide application of the issue of digital transformation in business sciences. Digital transformation requires major changes and innovations, especially in businesses. How businesses integrate digital technologies, transform business processes and the effects of this transformation on business performance are among the important research topics in the business discipline. This is followed by the Tourism Management department with a rate of 13%. This result indicates that tourism businesses are considering and utilizing various transformations (online booking, mobile application and self-service technologies, IoT devices, etc.) to improve their customer service, operations and marketing strategies.



Graphic 5. Data Collection Tools

Note. Graphic 5 categorizes the data collection tools used in the doctoral dissertations. A total of 36 different data collection tools have been identified. Since multiple data collection tools were used in some studies, the total number of tools exceeds the number of dissertations analyzed. The data indicates that quantitative studies are predominant in the dissertations, with a significant 67% of them utilizing quantitative data collection tools, primarily surveys.

The data analysis methods of these doctoral dissertations are given in Graphic 6:



Graphic 6. Data Analysis Methods

Note. In Graphic 6, data analysis methods are categorized. When the table is examined, it is understood that quantitative methods (factor analysis, ANOVA, confirmatory factor analysis, regression analysis, etc.) were used to analyze the data in 17 (57%) of the 30 doctoral dissertations. Since quantitative methods allow the findings of the research to be diversified and different perspectives to be developed, it is possible to interpret that they may have been preferred in the doctoral dissertations examined.

Table 4. Reliability Measures

Categories	f	%
Reliability analysis with package programs such as SPSS	23	46%
Providing information on ethics and data privacy issues	7	14%
Ensuring participant confirmation	6	12%
Obtaining expert opinions	4	8%
Implementation of pilot applications	4	8%
Includindraw data by adhering to the nature of the data	2	4%
Using the triangulation technique	1	2%
Realization of long-term participation	1	2%
Collecting data in the participants' familiar natural environment	1	2%
Use of participant observers	1	2%

Note. Table 4 shows the measures taken to ensure reliability in doctoral dissertations. This table is important in terms of displaying a different aspect of the studies included in the descriptive content analysis studies from the standard analysis types. Since more than one reliability measure is used in a study, the number of these measures is higher than the number of doctoral dissertations analyzed. When the data are examined, it is seen that reliability analyses are mostly performed with package programs such as SPSS while writing doctoral dissertations. When the percentages are examined, it is observed that the least used methods are the use of triangulation technique, long-term participation, collecting data in the natural environments that the participants are accustomed to, and the use of participant observers.

Conclusion

This study, which aims to analyze doctoral dissertations on digital transformation in universities across various categories, identifies general trends, fields, and topics addressed in these dissertations, and seeks to provide guidance for future researchers in the field. In the analysis of the research data, descriptive and categorical content analysis methods were employed. Categories were developed based on the sub-objectives of the study, and the doctoral dissertations were examined under nine distinct categories: publication years, affiliated institutes, publication languages, provinces where they were published, sample groups, departments, data collection tools, data analysis methods and reliability measures.

According to the data obtained as a result of the research, although doctoral dissertations on digital transformation started to be written as of 2016, a significant increase was observed in the number of doctoral dissertations published especially as of 2022. When the YOK database was analyzed, it was determined that there were 30 doctoral dissertations. The presence of 30 doctoral dissertations in the YOK database shows that the number of studies on digital transformation is still limited. This result indicates that the overall number of doctoral dissertations on digital transformation in Turkey is still a developing research area.

In the scanned database, it was concluded that doctoral dissertations on digital transformation were written in 2 languages. In the YOK database, these two languages are shown as English and Turkish. When the doctoral dissertations on digital transformation were analyzed according to the provinces where they were published, it was observed that Istanbul ranked first. It was followed by Izmir, Ankara and Eskişehir. As the largest and most developed cities in Turkey, Istanbul and Izmir have the strongest academic and economic infrastructure. Universities in these cities have the capacity to conduct research at the national and international level and are where academic studies are concentrated. The high concentration of theses in Istanbul and Izmir shows that Turkey's academic infrastructure on digital transformation is advanced and that these cities have a strong infrastructure to drive digital transformation. Universities in these cities are playing an important role in shaping the impact of digital transformation in Turkey by conducting research to understand its impact on business, the public sector and individuals. This indicates that digital transformation strategies are being addressed in more depth through academic studies in these provinces and that these cities can be pioneers in Turkey's digitalization process.

When the doctoral theses are analyzed according to their study purposes, it is seen that the most studied objectives are technology adaptation and sectoral technology applications. This shows that the sector-specific effects and applications of digital transformation are an important research area in academic terms. The least studied objectives are logistics and transportation, entrepreneurship and innovation. The scarcity of studies written for this purpose may indicate that more research is needed in the field.

The study concluded that the majority of the doctoral dissertations were published in departments affiliated with institutes of social sciences. Of the 23 doctoral dissertations affiliated to the Institute of Social Sciences, 9 were published in the departments of Business Administration, 4 in Tourism Management, 2 in Public Relations and Publicity, 1 in Finance, 1 in General Journalism, 1 in Banking and Finance, 1 in Industrial Policies and Technology Management, 1 in Communication Design and Management, 1 in Management and Strategy, 1 in Science and Technology Policy Studies, and 1 in Technology and Information Management. This result leads to the conclusion that the fields of study of the departments of social sciences institutes are suitable for analyzing digital transformation issues. In particular, Business Administration and Tourism Management are fields where digital technologies directly affect business models, customer relations, service delivery and competitive strategies. Therefore, the fact that the topic of digital transformation is intensively covered in these departments shows that digitalization is an important theme that shapes the future of businesses and the tourism sector. These findings show that digital transformation has become an important research topic not only in the fields of technology and engineering but also in social sciences. The capacity of departments of social science institutes to address digital transformation issues enables in-depth analyses of how digital technologies are transforming social structures, business processes and individual behaviors. This contributes to our understanding that digital transformation is not only a technical issue, but also a process of social, cultural and economic transformation. The fact that only 1 doctoral dissertation written in the departments of the Institute of Science and Technology and Informatics shows that there is a significant gap in the literature in this sense. Of the 7 doctoral dissertations published in the departments affiliated to the graduate education institute, 2 were published in Engineering Management, 1 in Management Engineering, 1 in Business Management, 1 in Public Law and 2 in Business Administration.

It was observed that business employees and/or managers were preferred as sample groups in published doctoral dissertations. This result supports the findings above. In the field of social sciences, it seems quite normal to examine the sample groups of doctoral dissertations, which are mostly published in the Department of Business Administration, through employees and/or managers.

When doctoral dissertations are analyzed in terms of research types, it is observed that quantitative methods are more prominent. Examining a broad and complex topic such as digital transformation with objective and measurable data makes the results more reliable and reproducible. In addition, large-scale data analyses are necessary to understand the social and economic impacts of digital transformation. Quantitative methods are suitable for identifying trends, patterns and correlations across large data sets. However, since digital transformation is a relatively new topic, qualitative methods should also be preferred to reveal, quantify and categorize the current situation. When the research methods were analyzed, it was seen that the survey method, which is frequently preferred in quantitative studies, stood out as the most commonly used method in doctoral dissertations and supported the previous finding.

Finally, it was concluded that reliability criteria were provided with software packages such as SPSS while writing doctoral dissertations. This result is a natural reflection of the fact that doctoral dissertations are written based on quantitative methods.

Future Research

The study concludes that digital transformation has gained significant popularity in the last two years. In order to understand why this concept has attracted so much attention in such a short period of time, it is thought that a study using quantitative, qualitative and mixed methods will make valuable contributions to the existing literature and practitioners. Future research could be expanded by encouraging participation from different disciplines and institutes, examining the impacts of digital transformation in different industries and different user groups (e.g. consumer groups, public sector workers). Future research can offer more comprehensive perspectives by fostering collaborations and integration across these different disciplines. Technological advances and new research methods (e.g. artificial intelligence based analysis techniques) can be used in digital transformation research. In addition to the studies in the national field, examining theses in the international field can also be considered among the suggestions that can be given for researchers.

Finally, suggestions on the impact of the concept of digital transformation outside the academic field are also included. Thanks to technologies such as automation, data analytics and artificial intelligence in the business world, business processes are carried out faster and more accurately. For this reason, companies and organizations should continuously train their employees and develop their digital skills in order to use digital tools more effectively. On the other hand, digital transformation leads to the emergence of new business areas. Especially in the technology and digital sectors, innovative business models, start-ups and new career opportunities are emerging. In addition, digital tools enable individuals to bring their creative projects to a wider audience. In this context, an education and entrepreneurship ecosystem that encourages innovative thinking should be created and digital skills and entrepreneurship trainings should be popularized.

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I hereby declare that the study has not unethical issues and that research and publication ethics have been observed carefully.

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The study was conducted and reported by a researcher.

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Ethics committee approval was not obtained for this study because I declare as the responsible author that this study is one of the studies that does not require ethics committee approval.

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GENİŞLETİLMİŞ ÖZET

İletişim ve bilgisayarlar dahil bütün teknoloji ve üretim sistemlerindeki gelişmeler, dijital dönüşüm sürecinin başlamasına kaynak oluşturmıştır. Endüstri devriminin dördüncü aşaması olarak da ifade edilen bu dönüşüm süreci, işletmelerin daha hızlı, daha verimli ve maliyet etkin bir şekilde çalışmasını sağlarken, aynı zamanda sürekli yenilik ve gelişim için bir zemin oluşturmaktadır. 2000'li yıllarda hız kazanan dijitalleştirme sürecinin, çeşitli alanlardaki kurumsal yapılar ve iş yapma biçimlerinde önemli revizyonlar meydana getirdiği anlaşılmaktadır. Başka bir ifade ile, dijital dönüşüm süreci ile birlikte, iletişimden bankacılığa, sosyal medyadan mobil iletişim gibi uygulamalara, robotlardan akıllı sistemlere, vb. birçok alanda büyük bir değişim yaşanmıştır.

Bireyler, iş süreçleri ve teknoloji üzerinde değişim yaratan dijital dönüşümün, akademik ortamı da etkilediği görülmektedir. Geleneksel iletişim biçimleri, dijital dönüşümle birlikte daha hızlı ve daha etkili hale gelirken, iletişim süreçleri de daha verimli bir şekilde yönetilebilir hale gelmektedir. Bu durum, iş dünyasından eğitim alanına kadar birçok alanda gözlemlenebilir etkiler doğurabilmektedir. Özellikle, akademisyenlerin ve öğrencilerin mevcut kaynaklara, veri setlerine ve bilgiye erişiminin kolaylaşması, bilgi teknolojisinin akademik amaçlı kullanımı ve akademik ortamdaki iş birliğini artırması dijital dönüşümün bu alandaki önemli faydalarındandır. Dijitalleşme ile belirli bir fiziksel mekanda gerçekleştirilen akademik çalışmaların sınırları esnetilmiş, akademik faaliyetler farklı mekanlarda ve zamanlarda gerçekleştirilebilir hale gelmiştir.

Bununla birlikte, dijital teknolojilerin ve dijitalleşmenin birçok alanda nasıl etkiler yarattığını anlamak ve bu etkileri yönetmek için akademik çalışmaların gerçekleştirilmesi elzemdir. Bu doğrultuda, farklı alanlarda birçok farklı akademisyen ya da uzman tarafından araştırılan dijital dönüşüm konusu son yıllarda doktora öğrencileri tarafından da sıklıkla araştırılan konulardan olmuştur. Doktora öğrencileri, bu konuda derinlemesine araştırmalar yaparak hem akademik literatüre katkı sağlayabilmekte, hem de endüstriyel ve sosyal uygulamalar için önemli ipuçları sunabilmektedir. Bu bağlamdan hareketle araştırmanın; üniversitelerde dijital dönüşüm konusunda yapılmış olan doktora tezlerinin farklı kategoriler çerçevesinden incelenmesi olarak tanımlanan amacına ulaşabilmek adına YÖK ulusal tez merkezi veri tabanında taranan tezler (doktora) yayın yılları, amaçları, yayınlandıkları iller, bağlı bulundukları enstitüler, yayınlandıkları diller, yayınlandıkları iller, örneklem grupları, anabilim dalları, veri toplama araçları ve veri analiz yöntemleri parametreleri baz alınarak incelenmiştir.

Belirtilen ana amaç kapsamında, alt araştırma soruları aşağıda belirtilmektedir:

- 1-Doktora tezlerinin, yıllarına göre dağılımı nasıldır?
- 2-Doktora tezlerinin, amaçlarına göre dağılımı nasıldır?
- 3- Doktora tezlerinin, bağlı bulundukları enstitülere göre dağılımı nasıldır?
- 4- Doktora tezlerinin, yayınlandıkları dillere göre dağılımı nasıldır?
- 5- Doktora tezlerinin, yayınlandıkları illere göre dağılımı nasıldır?
- 6- Doktora tezlerinin, örneklem grubunun özelliklerine göre dağılımı nasıldır?
- 7- Doktora tezlerinin, anabilim dallarına göre dağılımı nasıldır?
- 8- Doktora tezlerinin, kullanılan veri toplama araçlarına göre dağılımı nasıldır?
- 9- Doktora tezlerinin, kullanılan veri analiz yöntemlerine göre dağılımı nasıldır?
- 10-Doktora tezlerinin kullanılan güvenilirlik önlemlerine göre dağılımı nasıldır?

Araştırma sorularının analizi aşağıdaki bulguları ve yorumları ortaya çıkarmıştır:

Araştırma bulgularından elde edilen veriler ile, dijital dönüşüm konusunda yayınlanan doktora tezlerinin, 2022 yılı itibarıyla önemli bir artış gösterdiği sonucuna ulaşılmıştır. Dijital dönüşüm konusunun üniversitelerde doktora tezi olarak çalışılmaya başlama yılının ise 2016 yılı olduğu anlaşılmıştır. YÖK veri tabanı irdelendiğinde 30 adet doktora tezi bulunduğu tespit edilmiştir.

Taranan veri tabanında 2 dilde, dijital dönüşüm konulu doktora tezlerinin yazıldığı sonucuna ulaşılmıştır. YÖK veri tabanında, bu iki dil İngilizce ve Türkçe olarak gösterilmiştir. Araştırma kapsamındaki doktora tezleri, üniversitelerin bağlı bulundukları iller kapsamında analiz edildiğinde ise, İstanbul'un ilk sırada yer aldığı görülmüştür. Onu İzmir, Ankara ve Eskişehir takip etmiştir.

Çalışmada, yayınlanan doktora tezlerinin yüksek oranda sosyal bilimler enstitüsüne bağlı anabilim dallarında hazırlandığı tespit edilmiştir. Sosyal bilimler enstitüsüne bağlı 23 doktora tezinin 9'unun İşletme, 4'ünün Turizm İşletmeciliği, 2'sinin Halkla İlişkiler ve Tanıtım, 1'nin Maliye, 1'inin Genel Gazetecilik, 1'nin Bankacılık ve Finans, 1'nin Sanayi Politikaları ve Teknoloji Yönetimi, 1'nin İletişim Tasarımı ve Yönetimi,

1'nin Yönetim ve Strateji, 1'nin Bilim ve Teknoloji Politikası Çalışmaları, 1'nin Teknoloji ve Bilgi Yönetimi anabilim dallarında yayınlandığı görülmüştür. Bu sonuç, sosyal bilimler alanında yapılan araştırmaların akademik dünyada önemli bir yer tuttuğunu gösterebilmektedir. Sosyal bilimler, insan davranışları, toplumsal yapılar, kültürel süreçler gibi geniş bir alanı tanımlayan disiplinlerden oluştuğundan, bu alanda yapılan çalışmalar toplumun çeşitli yönlerini anlamak ve açıklamak için kritik bir öneme sahiptir. Ayrıca, fen bilimleri ve bilişim enstitüsüne bağlı anabilim dallarında yazılmış 1 adet doktora tezine ulaşılmış olması alanyazında bu anlamda göz ardı edilemeyecek bir boşluk olduğunu göstermektedir. Lisansüstü eğitim enstitüsüne bağlı anabilim dallarında yazılmış 7 doktora tezinin ise, 2 tanesi Mühendislik Yönetimi, 1 tanesi İşletme Mühendisliği, 1 tanesi İşletme Yönetimi, 1 tanesi Kamu Hukuku ve 2 tanesi İşletme anabilim dallarında yayınlanmıştır.

Yayınlanan doktora tezlerinde örneklem grupları olarak işletme çalışanları ve/ veya yöneticilerinin tercih edildiği görülmüştür. Bu sonuç, yukarıdaki bulguları destekler niteliktedir. Sosyal bilimler alanında, en fazla İşletme anabilim dalında ortaya çıkan doktora tezlerinin, örneklem gruplarının çalışan ve/veya yöneticiler üzerinden incelenmesi son derece normal görünmektedir.

Doktora tezleri araştırma türleri bakımından incelendiğinde, nicel yöntemlerin araştırmacılar tarafından daha fazla tercih edildiği göze çarpmaktadır. Dijital dönüşüm gibi geniş ve karmaşık bir konunun nesnel ve ölçülebilir verilerle incelenmesi, sonuçların daha güvenilir ve tekrarlanabilir olmasını sağlamaktadır. Ek olarak dijital dönüşümün, toplumsal ve ekonomik etkilerini anlamak için büyük ölçekli veri analizleri gereklidir. Nicel yöntemler, geniş veri setleri üzerinde eğilimleri, desenleri ve korelasyonları belirlemek için uygundur. Dijital dönüşüm, teknolojik gelişmeler ve toplumsal değişimlerin kesişiminde ortaya çıkan karmaşık bir konudur. Bu nedenle, dijital dönüşüm süreçlerini anlamak, mevcut durumu belirlemek, verileri sayısallaştırmak ve farklı özelliklere göre kategorize etmek için nitel yöntemlerin de önemli bir araç olarak görülmesi gerekmektedir. Doktora tezleri kullanılan araştırma yöntemleri bakımından incelendiğinde ise, nicel çalışmalarda sık tercih edilen anket yönteminin doktora tezlerinde en çok kullanılan yöntem olarak öne çıktığı görülmüş ve bir önceki bulguyu desteklemiştir.