

THE CURRENT STATE OF PASTRY AND BAKERY EDUCATION IN TURKEY¹

TÜRKİYE'DE PASTACILIK VE EKMEKÇİLİK EĞİTİMİNİN GÜNCEL DURUMU

Serkan SEMİNT², Ali ŞEN²

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ABSTRACT


The aim of this study is to examine the universities in Turkey that provide education in the field of pastry and bakery, analyze the academic personnel employed in these institutions, review their educational curricula, and contribute to the related literature. To achieve this aim, the content analysis technique, one of the qualitative research methods, was employed. By searching the terms "pastry and bakery" in the Higher Education Program Atlas, universities offering education in this field were identified. Following the identification of universities, the research population and sample were determined. The population of the study consists of higher education institutions, while the sample includes universities that offer associate degree programs in the field of pastry and bakery. A literature review was conducted to establish the conceptual framework, and it was determined that there are six universities providing education in the pastry and bakery department. These universities' course curricula, academic staff profiles, and general institutional characteristics were analyzed using content analysis. The findings reveal that a total of 15 academic staff members are employed in these institutions, including 14 lecturers and 1 assistant professor. Among practical courses, bakery-related subjects were found to be the most frequently offered, while general courses focused on gastronomy dominated the theoretical curriculum. Based on the results obtained, recommendations for future improvements in the field are provided.

ÖZET

Bu araştırmanın amacı; Türkiye'de pastacılık ve ekmekçilik eğitimi veren üniversiteleri, bu kurumlarda istihdam edilen akademik personeli, bu kurumların eğitim müfredatlarını araştırmak ve ilgili literatüre katkı sağlamaktır. Amaç doğrultusunda nitel araştırma yöntemlerinden olan içerik analizi tekniği kullanılmıştır. Yükseköğretim Program Atlası'ndan "pastacılık ve ekmekçilik" kelimeleri taratılarak bu alanda eğitim veren üniversitelere ulaşılmıştır. Üniversiteler belirlendikten sonra araştırmanın evreni ve örneklemini belirlenmiştir. Araştırmanın evrenini yükseköğretim kurumları oluştururken örneklemini ise ön lisans düzeyinde pastacılık ve ekmekçilik alanında eğitim veren üniversiteler oluşturmaktadır. İlgili literatür taranmış, kavramsal çerçeve oluşturulmuş ve pastacılık ve ekmekçilik bölümünde eğitim veren 6 üniversitenin olduğu saptanmıştır. Bu üniversitelerin ders müfredatları, akademisyen profilleri ve üniversitelerin genel durumları içerik analizine tabii tutularak incelenmiştir. Üniversitelerde 14 Öğr. Gör., 1 Dr. Öğr. Üyesi olmakla birlikte toplamda 15 akademisyenin istihdam edildiği tespit edilmiştir. Uygulamalı ders kapsamında en fazla unlu mamuller, teorik ders kapsamında ise en fazla gastronomiye yönelik genel derslerin verildiği diğer sonuçlar arasındadır. Elde edilen sonuçlar doğrultusunda ileriye yönelik yapılması gereken öneriler sunulmuştur.

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² Arş. Gör., Karamanoğlu Mehmetbey Üniversitesi, Uygulamalı Bilimler Fakültesi, Gastronomi ve Mutfak Sanatları, serkansemint@kmu.edu.tr,  ORCID: 0000-0002-6305-1898

² Dr. Öğr. Üyesi, Karamanoğlu Mehmetbey Üniversitesi, Uygulamalı Bilimler Fakültesi, Gastronomi ve Mutfak Sanatları, alisen@kmu.edu.tr,  ORCID: 0000-0002-4310-362X

1. Giriş

Nutrition is the most fundamental and indispensable need of humanity, forming the cornerstone of survival and well-being. Maslow's Hierarchy of Needs (1943) emphasizes that human needs are arranged in a hierarchical progression, beginning with the most basic physiological necessities and culminating in self-actualization. When lower-level needs are unmet, efforts to fulfill higher-order aspirations are delayed. Within this framework, Maslow identified five primary categories of needs: physiological needs, safety, belongingness, esteem, and self-actualization. The satisfaction of physiological needs, such as food, water, and air, is critical for survival and precedes other human endeavors (Milheim, 2012). For instance, when a key nutritional resource is scarce, an organism instinctively prioritizes acquiring sustenance (Taormina & Gao, 2013).

Within the realm of human nutrition and culinary practices, gastronomy occupies a unique position as both an art and a science. Santich (2004) describes the concept of gastronomy as inherently multifaceted and challenging to define. The term is subject to varying interpretations and definitions, reflecting its historical depth and interdisciplinary connections. Sarıışık and Özbay (2015) argue that the integration of gastronomy with diverse scientific disciplines underpins its complexity. Brillat-Savarin (1971), often considered a seminal figure in gastronomic thought, proposed two distinct perspectives on the field: the pursuit of excellence in food and drink for pleasure and the scientific study of food-related phenomena. Establishing gastronomy as a rigorous academic discipline supported by empirical research is essential for advancing the field (Scarpato, 2002).

From a historical perspective, pastry and bakery practices trace their origins to early bread production, later enhanced with sweeteners and flavoring ingredients. It is widely believed that many of the foundational pastry products known today were developed during the 17th and 18th centuries (Karaca et al., 2021). For example, the tradition of the birthday cake is thought to have emerged in 1875, when cakes became a customary celebratory gift (Saygılı, 2016). Modern pastry production often revolves around sponge cakes, which serve as the basis for moist cakes presented in various forms, such as loaf cakes, roll cakes, and layered cakes. Ingredients like flour, sugar, eggs, and butter form the foundation of these confections, with fruits, nuts, and chocolates providing additional flavor and texture (Çelik, 2016).

The growing popularity of cakes and pastries catalyzed the emergence of pastry-making as a professional field. Over time, pastry-making evolved into a recognized profession, revitalizing the sector and driving innovation. Once limited to special occasions such as weddings, cakes are now central to various celebrations, particularly birthdays (Humble, 2010; Kronl, 2011).

In recent years, the phenomenon of gastronomy has gained unprecedented popularity, invigorating the food and beverage industry and fostering the development of related professions. Fields such as gastronomy and culinary arts, food and beverage management, and professional pastry-making have witnessed remarkable growth. This rapid expansion has also led to the establishment of associate degree programs in pastry and bakery studies, addressing the rising demand for specialized education in this area.

The current study investigates the state of pastry and bakery education in Turkey, a relatively underexplored subject in academic literature. Framed by the question, What is the current state of pastry and bakery education in Turkey? the study employs content analysis to evaluate universities offering such programs. The findings provide critical insights into the structure of these programs, their curricula, and the academic staff involved, contributing to both the academic literature and the practical development of the food and beverage industry. The study's significance lies in its potential to inform future educational and professional initiatives, thereby advancing the field of pastry and bakery education.

1. Kavramsal Çerçeve

2.1. Pastry

The invention of whipped cream by Vatable in the 18th century marked a significant milestone in the pastry industry. Similarly, the renowned French pastry chef Stanislas Leczynski discovered Baba Reale, also known as Chambaba. Under the influence of Antoine Carême, Paris emerged as the epicenter of pastry art in the 19th century (Çelik, 2016). Carême's book, *Le Pâtissier Royal*, is one of the first works to systematically describe the art of pastry-making (Karaca et al., 2011). In 1850, Eben Norton Horsford's discovery of baking powder introduced a new dimension to pastry-making (Food Innovation Center, 2016). During the 19th century, cakes began to be baked using refined white flour and baking powder instead of yeast (The History of Cake, 2018).

In the 1930s, Gaston Lenôte, a pastry chef in France, produced a book containing simple recipes, which became one of the most important contributions to the pastry field (Sezer, 2020). The rapid development of the pastry profession began in the 14th century, when pastry chefs in France started establishing their own businesses, leading to an expansion in the variety of pastry products. Ingredients such as cocoa and chocolate, discovered by Europeans in the Americas, along with honey, became integral to baked goods. By the 17th and 18th centuries, many foundational pastry products, as known today, were already in existence. Following the French Revolution of 1789, many pastry chefs who had worked as servants in aristocratic households opened their own shops, giving rise to the first patisseries. From the early 21st century onward, the popularity of pastry products grew exponentially, supported by new chefs and innovations in the field. Within large enterprises, pastry production evolved into an independent unit with its own organizational structure. For instance, a chef specializing in preparing breakfast pastries like croissants is called a *boulangier*, while those creating ice creams and frozen desserts are known as *glaciers*. Similarly, *confiseurs* specialize in sweets and pastries, and *decoreurs* focus on decorative displays and sugar-based ornaments (Gisslen, 2013).

These advancements also influenced the production of sponge cake, a fundamental component in many pastry products. Sponge cakes are made using ingredients such as eggs, flour, sugar, starch, ovalette, vanilla, and baking powder. The quality of a sponge cake is determined by its texture, crust structure, and distinctive color (Aslan, 2021; Dokuzcan, 2019). The discovery of cocoa following the fall of the Roman Empire and the exploration of the Americas introduced a transformative element to pastry-making, adding a new layer of complexity to the field (Ekinci, 2018).

2.2. Bakery

The history of bread extends back to the dawn of human civilization. Archaeological findings reveal that grinding and baking techniques were in use as early as 4300 BCE. During ancient times, it is known that humans consumed food without much processing. Research indicates that the Babylonians were baking bread in ovens around 4000 BCE, although the specific types of bread they produced remain unknown. Sourdough bread was first invented around 1800 BCE, and the Egyptians enriched their bread by adding ingredients such as honey and dates. The art of bread baking spread from ancient Egypt to the Mediterranean countries. The ancient Greeks learned bread-making from the Egyptians around the 8th century BCE. During the Roman era, bread-making advanced significantly, and large commercial bakeries were constructed. In Rome, there were reportedly 254 bakeries, and some sources suggest that the weight and price of bread were regulated by law (Erenoğlu, 2013).

Bread has always been a staple food across civilizations. Many beliefs and stories exist about the origins and evolution of bread. From a historical perspective, parallels can be drawn between the discovery of bread, the control of fire, and the transition to a settled way of life. According to one of the earliest accepted accounts of bread's discovery, after the invention of fire, early humans noticed that flour soaked in water developed pores, and roasting it on hot stones created a tastier product. This marked the beginning of bread consumption (Atik Gürbüz, 2017).

Bread subsequently spread from southern regions to central and other parts of Europe. Before the widespread cultivation of wheat, Europeans primarily used other grains such as rye, but by the 15th century, they began producing white bread from wheat. With the discovery and proliferation of

microorganisms and yeast in the 19th century, bread production evolved into an industrialized process. Turkey is one of the highest bread-consuming countries in the world. Bread made from wheat flour and fermented dough is widely consumed throughout the country. Additionally, bread made from corn, oats, rye, and similar grains is also produced, albeit on a more limited scale in certain regions (Url-1).

2.3. Pastry and Bakery Education

Pastry-making, as a branch of the food and beverage industry, has become an increasingly significant profession in today's world. Pastry kitchens hold a prominent place in global cuisine, encompassing a wide variety of widely consumed products. Desserts, being one of the most enjoyable food categories, are also among the most frequently produced. Due to their energy-providing properties, desserts are considered a fundamental part of basic food groups. Across global cuisines, desserts exhibit diverse forms and characteristics. In Turkish cuisine, pastries and desserts occupy a central role, showcasing significant variation depending on the ingredients and cooking methods used. For instance, cakes are made using foundational ingredients such as milk, cream, yogurt, or their derivatives, along with salted or unsalted butter. Professionals working in the pastry sector are required to possess comprehensive knowledge about cakes and be proficient in utilizing the appropriate tools, equipment, and ingredients (Demir, 2020). The goal of pastry and bakery education is to meet the demand for skilled pastry chefs, bakers, and dessert specialists in hospitality and food and beverage establishments. It also aims to cultivate individuals who are not only experts in their field but also proficient in foreign languages, ensuring their ability to operate in international settings (Url-2).

Currently, there are six universities in Turkey offering education in pastry and bakery programs. These universities are presented in Table 1.

Table 1. Universities Offering in Pastry and Bakery in Türkiye

Type	University	Vocational School	Program
Public	Akdeniz University	Göynük Culinary Arts Vocational School	Pastry and Bakery
Public	Karamanoğlu Mehmetbey University	Social Sciences Vocational School	Pastry and Bakery
Public	Sakarya University of Applied Sciences	Sapanca Tourism Vocational School	Pastry and Bakery
Private	Başkent University	Social Sciences Vocational School	Pastry and Bakery
Private	Gelişim University	Istanbul Gelişim Vocational School	Pastry and Bakery
Private	Rumeli University	Vocational School	Pastry and Bakery

Pastry and bakery associate degree programs in Turkey vary in terms of quotas, scholarship opportunities, and admission scores. Public universities admit students uniformly with a quota of 32, offering free education. In contrast, private universities provide separate quotas for fully funded scholarships and partial discounts, allowing for more flexible admissions policies. Among these institutions, Gelişim University stands out with the highest total quota of 46 students. Table 2 provides detailed information on the universities offering pastry and bakery education, including quota details, scholarship types, and minimum required scores for admission.

Table 2. Universities Offering Pastry and Bakery Associate Degree Programs

University	Exam Type	Scholarship Type	Total Quota	Minimum Score
Akdeniz University	TYT	Free	32	301.32
Karamanoğlu Mehmetbey University	TYT	Free	32	266.71
Sakarya University of Applied Sciences	TYT	Free	32	291.85
Başkent University	TYT	Full Scholarship	6	376.58

Başkent University	TYT	25% Discount	20	187.14
Gelişim University	TYT	Full Scholarship	8	323.07
Gelişim University	TYT	50% Discount	38	215.66
Rumeli University	TYT	Full Scholarship	5	310.71
Rumeli University	TYT	50% Discount	21	207.18

3. Methodology

The concept of food, as ancient as human history itself, has experienced rapid growth and evolution in recent times. The expansion of gastronomy across various domains has positively influenced emerging trends and food and beverage businesses. Social media, combined with people's growing enthusiasm and desire for culinary experiences, has made gastronomy a popular field and revitalized the food and beverage sector. This rapid development has led to the diversification of the industry into specialized areas, including pastry and bakery programs. Given that this sector heavily relies on human resources, it is essential for personnel to receive formal education and training in the field. Based on this premise, the primary objective of this research is to investigate the universities in Turkey that offer education in pastry and bakery, examine the academic personnel employed in these institutions, evaluate their curricula, and contribute to the related literature. To achieve this objective, a keyword search for "pastry and bakery" was conducted in the Higher Education Program Atlas, identifying six universities (three private and three public) offering education in this field. The population of the study comprises higher education institutions, while the sample is limited to universities providing associate degree programs in pastry and bakery education. To fulfill the study's objectives, the content analysis method, a qualitative research approach, was employed. Content analysis is a systematic, objective, and numerical analysis used to measure variables within a text (Wimmer & Dominick, 2000). In other words, it is a widely used method in social sciences and qualitative research where words within texts are grouped into smaller content categories and coded according to predefined rules, making it systematic and repeatable (Büyüköztürk et al., 2013). The fundamental process of content analysis involves organizing and interpreting similar data within a conceptual and thematic framework, presenting it in a format that is comprehensible to the reader (Yıldırım & Şimşek, 2011). This makes content analysis an effective method for evaluating existing literature in a specific field (Falkingham & Reeves, 1998).

The study was conducted to analyze the state of pastry and bakery education programs and present the findings in a comprehensible manner to stakeholders. The research focused on answering the following questions:

- How many universities in Turkey offer education in pastry and bakery?
- What is the distribution of titles among the academic staff and faculty members employed in pastry and bakery programs?
- What are the curricula of the universities offering education in pastry and bakery, and what courses are included?
- What are the undergraduate, master's, and doctoral fields of graduation for the academic staff and faculty members employed in pastry and bakery programs?

4. Findings

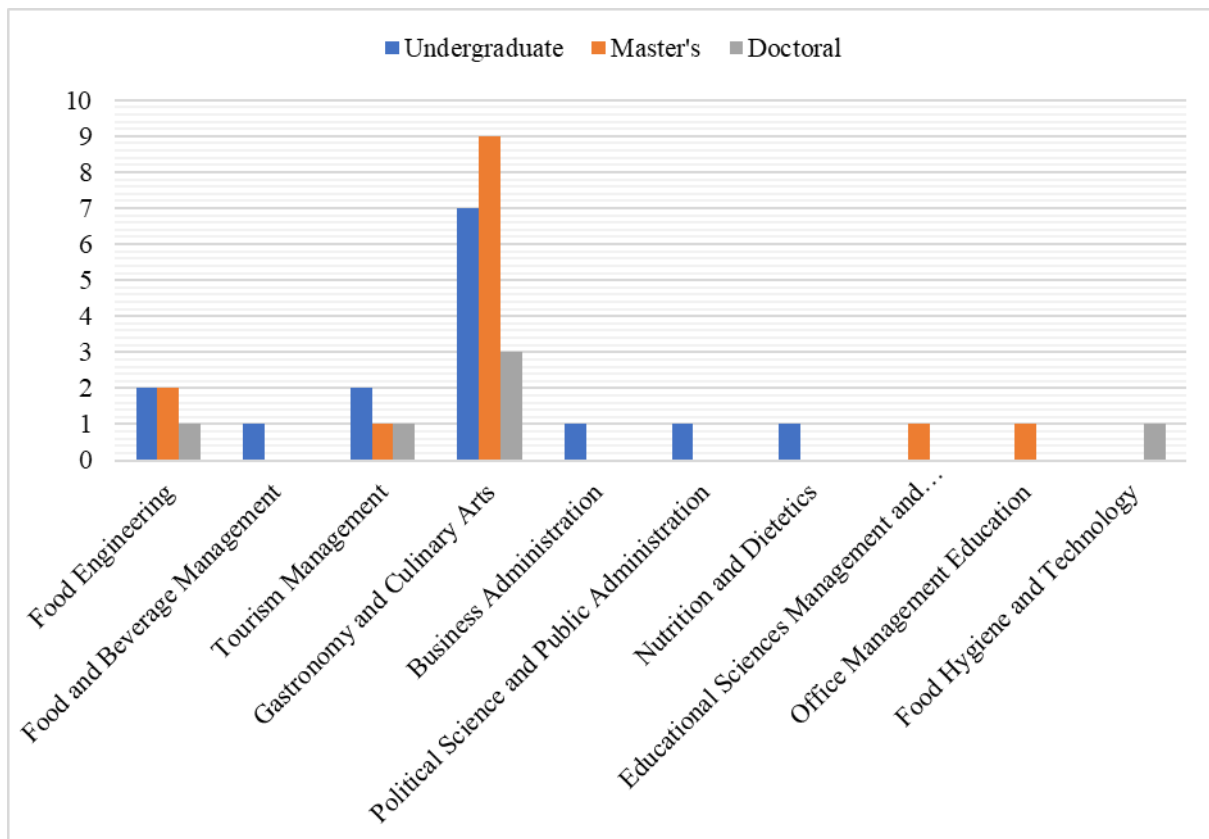
The distribution of academic titles among faculty members employed in pastry and bakery associate degree programs is presented in Table 3. The total number of academic staff in these programs is 15, with only one Assistant Professor among them.

Table 3. Profile of Academicians Employed in Pastry and Bakery Programs

University	Lecturer	Assistant Professor	Associate Professor	Professor
Akdeniz University	3	-	-	-
Karamanoğlu Mehmetbey University	2	1	-	-
Sakarya University of Applied Sciences	2	-	-	-
Başkent University	3	-	-	-
Gelişim University	1	-	-	-
Rumeli University	3	-	-	-
Total	14	1	-	-

The educational background of academicians employed in pastry and bakery programs is illustrated in Figure 1. Overall, 46% of the academicians have graduated from or are currently pursuing education in Gastronomy and Culinary Arts. This is followed by 13% in Food Engineering and Tourism Management. Other fields, including Food and Beverage Management, Business Administration, Political Science and Public Administration, Nutrition and Dietetics, Educational Sciences Management and Supervision, Office Management Education, and Food Hygiene and Technology, collectively account for 7%.

Figure 1: Fields of Undergraduate, Master's, and Doctoral Graduation of Academicians Employed in Pastry and Bakery Programs



The themes of practical courses offered in pastry and bakery programs are outlined in Table 4. These themes were derived from the curricula of six universities. Practical courses are categorized into five main themes. The findings reveal that courses related to bakery products represent the largest portion, accounting for 36% of the total. This is followed by courses on desserts (29%), courses on new trends (13%), and both pastry courses and design and aesthetics courses, each accounting for 11%.

Table 4. Distribution of Practical Courses in Pastry and Bakery Programs

Theme	Courses	Frequency (%)
Bakery Products	<ul style="list-style-type: none"> ▪ Dough Techniques ▪ Regional Bread Making ▪ International Bread Making ▪ Breakfast Pastries ▪ Artisan Bread Baking Techniques ▪ Bread and Bakery Products ▪ Introduction to Pastry and Bakery ▪ Regional and Artisan Bread Techniques ▪ International Pastry and Bread Making ▪ Basic Dough Preparation Techniques ▪ Advanced Baking Practices ▪ Functional Desserts and Bread Production 	%36
Dessert Courses	<ul style="list-style-type: none"> ▪ Chocolate Art ▪ Dessert Preparation Techniques ▪ Regional Desserts ▪ Turkish Desserts ▪ Ice Cream and Sorbets ▪ Chocolate Art and Boutique Pastry ▪ Dessert and Beverage Pairing ▪ Jams and Marmalades ▪ Hot Desserts ▪ Cold Desserts ▪ Confectionery Art ▪ Syrup and Halva Techniques ▪ Modern Pastry and Dessert Applications ▪ Creative Pastry Applications ▪ Turkish Dessert Culture and Practices 	%29
Design and Aesthetics	<ul style="list-style-type: none"> ▪ Decoration in Pastry ▪ Modern Pastry Applications ▪ Boutique Business Design ▪ Food Styling ▪ Sugar Decoration Art ▪ Basic Cake Decoration ▪ Pastry Styling and Photography 	%11
New Trends	<ul style="list-style-type: none"> ▪ Pastacılık ve Ekmekçilikte Yeni Akımlar ▪ New Trends in Pastry and Bakery ▪ Molecular Gastronomy ▪ Dough Techniques and Fermentation Technology ▪ Innovative Pastry and Bread Making ▪ New Culinary Trends ▪ Functional Foods ▪ Special Diets for Specific Needs 	%13
Pastry Courses	<ul style="list-style-type: none"> ▪ Advanced Pastry Techniques ▪ Classic Pastry Practices ▪ Pastry Techniques I ▪ Pastry Techniques II ▪ Basic Cake Making Techniques ▪ Classic and Modern Pastry 	%11

The themes of theoretical courses offered in pastry and bakery programs are outlined in Table 5. Similar to practical courses, these themes were developed by analyzing the curricula of six universities. The analysis reveals that the most common theoretical courses are related to *Gastronomy*, which account for **27%** of the total. This is followed by courses on *Management* (**21%**), *Food-Focused Courses* and *Dessert-Focused Courses* (each **20%**), and *Cost-Related Courses* (**12%**). Another notable finding is that the same courses are often offered under similar names across all six universities.

Table 5. Distribution of Theoretical Courses in Pastry and Bakery Programs

Theme	Courses	Frequency (%)
Food-Focused Courses	<ul style="list-style-type: none"> ▪ Food Hygiene and Sanitation ▪ Food Chemistry ▪ Food Processing and Preservation Techniques ▪ Food Additives ▪ Food Safety ▪ Food Preservation Techniques ▪ Food Safety and Hygiene ▪ Food Safety, Hygiene, and Sanitation ▪ Food Formulations and Sensory Analysis ▪ Food Technology ▪ Principles of Food Processing ▪ Additives in Bakery Products ▪ Preservation Methods in Bakery Products 	%20
Management Courses	<ul style="list-style-type: none"> ▪ Menu Management ▪ Food and Beverage Operations and Management ▪ Professional Development in Culinary Arts ▪ Café and Pastry Shop Management ▪ Ready Meal Production and Organization ▪ Banquet and Catering Services Management ▪ Food and Beverage Services Management ▪ Kitchen Services Management ▪ Banquet Kitchen and Organization ▪ Food and Beverage Operations ▪ Quality Management in Kitchens ▪ Menu Planning and Management ▪ Food Photography and Social Media Management ▪ Mass Catering Systems and Catering Services Management 	%21
Gastronomy Courses	<ul style="list-style-type: none"> ▪ Principles of Nutrition ▪ New Trends in Gastronomy ▪ Gastronomy Tourism ▪ Gastronomy and Media ▪ Materials Knowledge for Pastry and Bakery ▪ Molecular Gastronomy ▪ Regional Cuisines ▪ Ancient Culinary Culture ▪ Kitchen Equipment ▪ Sociology of Food ▪ Coffee and Tea Culture ▪ Sustainable Gastronomy Practices ▪ History and Culture of Culinary Arts ▪ Breakfast Pastries ▪ Regional Desserts 	%27

	<ul style="list-style-type: none"> ▪ Food and Beverage Service ▪ Pastry Buffet ▪ Turkish Culinary Culture 	
Dessert-Focused Courses	<ul style="list-style-type: none"> ▪ Introduction to Pastry and Bakery ▪ Dessert and Beverage Pairing ▪ Pastry Buffet ▪ Diet-Friendly Cake and Bread Making Techniques ▪ Dessert Preparation Techniques ▪ Advanced Pastry Techniques ▪ Sugar Paste Modeling and Techniques ▪ Artisan Chocolate Production Techniques ▪ Regional Desserts 	%20
Cost-Related Courses	<ul style="list-style-type: none"> ▪ Culinary Mathematics ▪ Principles of Nutrition and Menu Planning ▪ Food and Beverage Cost Control ▪ Menu Management and Planning ▪ Food and Beverage Automation Systems ▪ Food and Beverage Costs ▪ Cost Control in Food and Beverage Businesses 	%12

5. Conclusion and Recommendations

The growing interest in gastronomy, both globally and in Turkey, is reshaping various sectors and driving new trends. This enthusiasm has encouraged individuals to dine out more often, explore gastronomy through literature and research, and engage in gastronomic tourism. As a result, there is an increasing demand for qualified personnel in various interconnected fields, including food and beverage services, tourism, and media, all of which impact the hospitality industry. To meet these demands, educational institutions offering specialized programs in gastronomy have emerged and grown steadily, with the number of such institutions and their students increasing annually.

Turkey has a longstanding tradition of gastronomy education, and the number of institutions providing it has been rising rapidly. However, challenges such as the quality of education, accreditation processes, student and departmental satisfaction, faculty and curriculum alignment, and the adequacy of infrastructure remain topics of discussion (Sezen, 2018). The pastry and bakery field has similarly adapted to this rising interest, necessitating a focus on its integration into educational frameworks. This study aims to contribute by analyzing the curricula, faculty, and general state of universities offering pastry and bakery education in Turkey, providing a foundation for future research.

Key Findings

- Distribution of Institutions:

Six higher education institutions were identified as offering pastry and bakery programs in Turkey. These institutions are located in the Marmara Region (Istanbul, Sakarya), Central Anatolia Region (Karaman, Ankara), and Mediterranean Region (Antalya).

- Faculty Composition:

Among these institutions, 14 lecturers and 1 assistant professor were identified. The majority of faculty members have educational backgrounds in Gastronomy and Culinary Arts, followed by Food Engineering and Tourism Management. The dominance of graduates in gastronomy can be attributed to the rapid expansion of programs in this field.

- Curricular Distribution:

The curricula of pastry and bakery programs were categorized into two main themes: practical and theoretical courses. Practical courses primarily focus on bakery products, while theoretical courses emphasize gastronomy. A balanced distribution between these two categories is a notable finding.

- Graduate Expectations:

Graduates expect their education to align with employment opportunities during and after their studies. Meeting these expectations through industry-aligned curricula can enhance graduates' adaptability to professional life and accelerate their career progression.

Recommendations

- Industry Collaboration in Curriculum Design:

Input from industry representatives should be integrated into curriculum development. Insights from professionals regarding industry gaps, required skills, and competencies can ensure that the educational framework is aligned with real-world demands.

- Qualitative Research on Student Motivations and Expectations:

Since pastry and bakery programs are relatively new, qualitative studies should be conducted with students to understand their motivations, career expectations, and reasons for choosing this field. Such research could inform program development and marketing strategies.

- Comparative International Studies:

Comparative analyses with similar programs abroad could offer valuable insights. Conducting SWOT analyses to examine strengths, weaknesses, opportunities, and threats can provide actionable recommendations for program enhancement.

- Focus on Faculty and Student Perspectives:

Research should also focus on both academic staff and students. Comparative analyses of faculty and student feedback can highlight the strengths and areas of improvement in the programs, offering a holistic view of their effectiveness.

- Practical and Theoretical Balance in Curricula:

A well-balanced approach to practical and theoretical courses should remain a priority. Practical skills enhance employability, while theoretical knowledge builds a robust academic foundation.

- Integration of Industry Expectations:

Industry expectations and trends should be regularly assessed and incorporated into the curriculum to ensure graduates are equipped with relevant skills and knowledge. This alignment will benefit both students and the industry.

Final Thoughts

The popularity of pastry and bakery education reflects the evolving dynamics of the gastronomy sector. Addressing industry needs while fulfilling academic standards will contribute significantly to the development of this field. Providing students with a robust combination of practical and theoretical skills should be a fundamental goal of academic and vocational institutions (Akmeşe, 2021). Future studies should continue exploring and refining educational approaches to ensure they meet the demands of both students and the ever-evolving gastronomy sector.

Ethics Statement: Since the study does not require a survey or interview on any institution, organization or person, it is not included in the studies requiring an ethics committee.

Author Contribution Statement: The authors contributed equally to the study.

Declaration of Interest: There is no conflict of interest declaration among the authors.

References

- Akmeşe, K. A. (2021). Türkiye'deki devlet üniversitelerinde gastronomi ve mutfak sanatları bölümlerinin müfredatları üzerine bir araştırma. *Çatalhöyük Uluslararası Turizm ve Sosyal Araştırmalar Dergisi*, (6), 75-93.
- Aslan, N. (2021). Pasta ve Unlu Mamuller. İçinde: Seçim, Y., Bayrakçı S. (Ed.), *İleri Mutfak Bilimleri* (ss. 127-151). Ankara: Detay Yayıncılık.
- Brillat-Savarin, J. A. (1971). *The Physiology of Taste: or, Meditations on Transcendental Gastronomy*, M. F. K. Fisher (İngilizceye Çeviren). (İlk baskı: *La Physiologie du gout* adıyla Paris:1826), New York: Counterpoint.
- Büyüköztürk, Ş., Kılıç Çakmak, E., Akgün, Ö. A., Karadeniz, Ş. & Demirel, F. (2013). *Bilimsel araştırma yöntemleri*. Ankara: Pegem Akademi Yayıncılık.
- Çelik, S. (2016). Geçmişten Günümüze Pastacılık, Gıda Teknolojisi. Erişim Adresi: <https://www.gidateknolojisi.com.tr/haber/2016/02/gecmisten-gunumuze-pastacilik>. (Erişim Tarihi: 20.02.2024).
- Demir, N. (2020). Engelli bireylere verilen temel pastacılık eğitimi ve çıktıları (Yüksek Lisans Tezi), Gaziantep Üniversitesi, Gaziantep.
- Dokuzcan, B.D. (2019). Pastacılıkta yumurta ikamesi olarak nohut suyu kullanımı ve yumurtasız pandispanya örneği (Yüksek Lisans Tezi), Okan Üniversitesi, İstanbul.
- Ekinci, A. (2018). Pastanın da bir tarihi var. <https://www.foodtime.com.tr/makale/pastanin-da-bir-tarihi-var-m264.html> (Erişim Tarihi: 20.02.2024).
- Erenoğlu, N. (2013). Ekmeğin tarihi ve Hekim Hacı Paşa'nın "Müntahab-ı Şifa" eserinde ekmeğe bahsi. *Mersin Üniversitesi Tıp Fakültesi Lokman Hekim Tıp Tarihi ve Folklorik Tıp Dergisi*, 51-52.
- Falkingham, L. T. & Reeves, R. (1998). Context analysis a technique for analysing research in a field, *Applied to Literature on The Management Of R & D At The Section Level. Scientometrics*, 42(2), 97-120.
- Gıda İnovasyon Merkezi (2016). Kek ve pandispanyanın tarihçesi. Erişim Adresi: <http://gidainovasyonmerkezi.com/kek-ve-pandispanya-tarihcesi/>. (Erişim Tarihi: 20.02.2024).
- Gisllen, W. (2013). *Professional baking. seventh Edition*, John Wiley & Sons, New Jersey.
- Gürbüz, İ. A. (2019). Osmanlı dönemi metinlerinde ekmeğe ve ekmeğe ilgili anlam çerçeveleri. *Akademik Dil ve Edebiyat Dergisi*, 3(4), 348-376.
- Humble, N. (2010). *Cake: A Global History*. London: Reaktion Books.
- Karaca, E. Usta, S. Şengül S. (2021). Tatlı, pasta ve hamur işleri (A. Kurnaz ve S. Şengül, Ed: 1. Baskı, Cilt 1). Ankara, Türkiye: Detay Yayıncılık.
- Kronld, M. (2011). *Sweet invention: a history of dessert*. Chicago: Chicago Review Press.
- Milheim, K. L. (2012). Towards a better experience: examining student needs in the online classroom through maslow's hierarchy of needs model. *Journal of online learning and teaching*, 8(2), 159.
- Santich, B. (2004). The study of gastronomy and its relevance to hospitality education and training. *International Journal of Hospitality Management*, 23, 15-24.
- Sarıışık, M., & Özbay, G. (2015). Gastronomi turizmi üzerine bir literatür incelemesi. *Anatolia Turizm Araştırmaları Dergisi*, 26(2), 264-278.
- Saygılı, S. (2016). Pastanın Türkiye serüveni. Erişim Adresi: <https://www.gazeteduvar.com.tr/hayat/2016/12/09/pastanin-turkiye-seruveni>. (Erişim Tarihi: 20.02.2024).

- Scarpato, R. (2002). Gastronomy studies in search of hospitality, Journal of Hospitality and Tourism Management, sayı: 9/2, s.1-12.
- Sezen, T. S. (2018). Gastronomi eğitiminin mevcut durumunun analizine yönelik bir araştırma (Yüksek Lisans Tezi), Balıkesir Üniversitesi, Balıkesir.
- Sezer, U. (2020). Gastronomide modern pastacılık. (1. Baskı). Kitapyurdu Doğrudan Yayıncılık.
- Taormina, R. J., & Gao, J. H. (2013). Maslow and the motivation hierarchy: measuring satisfaction of the needs. The American journal of psychology, 126(2), 155-177.
- The History of Cakes (2018). Erişim Adresi: <https://garrysgrill.com/the-history-of-cakes/>. (Erişim Tarihi: 20.02.2024).
- Url-1 (2024). file:///C:/Users/Pc/Downloads/8%20Hafta%20E%20K%20M%20E%20K%20(1).pdf (Erişim Tarihi:20.02.2024).
- Url-2 (2024). https://goynuk.akdeniz.edu.tr/tr/pastacilik_ve_ekmekcilik-6297 (Erişim Tarihi:20.02.2024).
- Wimmer, D.D. & Dominick, J.R. (2000). Mass media research: an introduction. belmont: Wadsworth Publishing Company
- Yıldırım, A. & Şimşek, H. (2011). Sosyal bilimlerde nitel araştırma yöntemleri. Ankara: Seçkin Yayıncılık.

Genişletilmiş Özet

Vatelle'nin 18. yüzyılda krem şantiyi icat etmesi, pastacılık endüstrisinde büyük etki yaratmıştır. Ünlü Fransız pasta şefi Stanislas Leczynski, 'Chambaba' olarak da bilinen 'Baba Reale'yi keşfetmiştir. Antoine Carême sayesinde Paris 19. yüzyılda pastacılığın merkezi haline gelmiştir (Çelik, 2016). Careme'nin yazdığı "Le Patissier Royal" adlı kitap, pastacılık yapma sanatını sistematik olarak anlatan ilk kitaplardan biridir (Karaca vd., 2011). 1850 yılında Evon Norton Horsford, kabartma tozunu keşfetmesiyle pastada yeni bir boyut açmıştır (Gıda İnovasyon Merkezi, 2016). 19. yüzyılda maya yerine rafine beyaz un ve kabartma tozu kullanılarak kekler pişirilmeye başlanmıştır (The History of Cake, 2018). 1930'lu yıllarda Fransa'da pasta şefi olarak çalışan Gaston Renanotre'nin basit tariflerini içeren bu kitap, pastacılık alanındaki en önemli eserlerden biridir (Sezer, 2020). 14. yüzyılda Fransa'da pasta şeflerinin kendi işletmelerini kurmasıyla pastacılık mesleği hızla gelişmiş ve pastacılık ürünleri daha da çeşitlenmiştir. Avrupalıların Amerika'da keşfettiği kakao ve çikolata, balın yanı sıra unlu mamullerin yeni malzemeleri haline gelmiştir. Bugün bilindiği gibi temel pastacılık ürünlerinin birçoğu 17. ve 18. yüzyıllarda var olmuştur. 1789 Fransız Devrimi'nden sonra aristokrat evlerinde hizmetçi olarak çalışan birçok pastacı kendi dükkânlarını açmış ve ilk pastaneler ortaya çıkmıştır. 21. yüzyılın başından itibaren yeni şeflerin desteğiyle pastacılık ürünlerinin popüleritesi hızla artmıştır. Pastane, büyük işletmelerin mutfak sistemi içinde bağımsız bir alan haline gelerek, içinde yeni bir organizasyon oluşturmuştur. Bu bağlamda, hamur işleri ve kruvasan gibi kahvaltılık unlu mamulleri hazırlayan şefe boulanger, dondurma veya dondurulmuş tatlılar hazırlayan şeflere glacier, tatlı ve pasta şefine ise confiseur, dekoratif gösteriler ve dekoratif şekerler hazırlayan kişiye decoratuer denir (Gisslen, 2013).

Ekmeğin tarihi insanlık tarihine kadar uzanmaktadır. Kazılar, öğütme ve pişirme tekniklerinin M.Ö. 4300 gibi erken bir tarihte uygulandığını göstermiştir. Antik çağda insanların yiyecekleri işlemeden tükettikleri bilinmektedir. Araştırmalar, M.Ö. 4000 yıllarında Babillilerin fırında ekmeği pişirmeyi bildiklerini göstermektedir. Ancak ne tür ekmeği yaptıkları bilinmemektedir. Ekşi mayalı ekmeğin ilk kez M.Ö. 1800 yıllarında icat edilmiştir. Mısırlıların ekmeği zenginleştirip içine bal, hurma gibi maddeler kattıkları tespit edilmiştir. Ekmeğin pişirme sanatı eski Mısır'dan Akdeniz ülkelerine yayılmıştır. Eski Yunanlılar, M.Ö. VIII. ekmeği Mısırlılardan öğrenmişlerdir. Daha sonra Roma döneminde ekmeğin yapımı oldukça gelişmiş ve büyük ticari fırınlar inşa edilmiştir. Roma'da ise 254

fırının olduğu ifade edilmiştir. Bazı kaynaklarda ekmeğin ağırlığının ve fiyatının kanunla belirlendiği de belirtilmektedir (Erenoğlu, 2013).

İnsanlık tarihi kadar eski olan yemek olgusu günümüzde çok hızlı bir ivme kazanmıştır. Gastronomi alanının hızlı bir şekilde her alanda yayılması yeni trenleri ve yiyecek içecek işletmelerini olumlu yönde etkilemiştir. Sosyal medyanın etkisi, insanların yeme içme eylemine karşı isteği ve arzusu gastronomiyi popüler hale getirmiş ve yiyecek içecek sektörü canlılık kazanmıştır. Bu denli hızlı gelişen yiyecek içecek sektörü de kendi içerisinde gelişmiş ve farklı alanlara ayrılmıştır. Pastacılık ve ekmekçilik bölümü bu alanlar içerisinde yerini almıştır. İnsan gücüne dayanan bu sektör için yetiştirilen personelin alanda eğitim almış olması önem arz etmektedir. Bu kanıdan yola çıkıldığında Türkiye’de pastacılık ve ekmekçilik eğitimi veren üniversiteleri, bu kurumlarda istihdam edilen akademik personeli, bu kurumların eğitim müfredatlarını araştırmak ve ilgili literatüre katkı sağlamak araştırmanın temel amacını oluşturmaktadır. Amaç doğrultusunda Yükseköğretim Program Atlası’ndan “pastacılık ve ekmekçilik” kelimeleri taratılarak bu alanda eğitim veren üniversitelere ulaşılmıştır. Üç vakıf üç devlet olmak üzere toplamda altı üniversitenin bu alanda eğitim verdiğine ulaşılmıştır. Araştırmanın evrenini yükseköğretim kurumları oluştururken örneklemini ön lisans düzeyinde pastacılık ve ekmekçilik alanında eğitim veren üniversiteler oluşturmaktadır. Araştırmanın temel amacına ulaşmak için nitel araştırma yöntemleri içerisinde olan içerik analizi tercih edilmiştir. İçerik analizi nitel bir araştırma yöntemidir ve bir metin içindeki değişkenleri ölçmenin sistematik, nesnel, sayısal bir analizdir (Wimmer ve Dominick, 2000). Başka bir deyişle sosyal bilimler alanlarında ve nitel araştırmalarda sıklıkla kullanılan içerik analizi, metindeki kelimelerin daha küçük içerik kategorilerinde gruplandırıldığı ve belirli kurallara göre kodlandığı sistematik ve tekrarlanabilir bir yöntemdir (Büyüköztürk vd., 2013). İçerik analizinin temel süreci, benzer verileri belirli bir kavramsal ve tematik çerçeve içerisinde bir araya getirerek okuyucunun anlayabileceği biçimde düzenleyip yorumlamaktır (Yıldırım ve Şimşek, 2011). Bu bakımdan içerik analizi, bir konu alanındaki mevcut literatürü değerlendirmek için yararlı bir yöntemdir (Falkingham ve Reeves, 1998). Pastacılık ve ekmekçilik eğitim programlarının durumunu analiz etmek ve ilgili kişilere daha anlaşılır bir veri sunmak adına aşağıda cevapları aranan araştırma soruları ile çalışma yürütülmüştür:

- Türkiye’de pastacılık ve ekmekçilik alanında eğitim veren üniversitelerin sayısı kaçtır?
- Pastacılık ve ekmekçilik alanında istihdam edilen öğretim elemanları ve öğretim üyelerinin ünvan dağılımı nasıldır?
- Pastacılık ve ekmekçilik alanında eğitim veren üniversitelerin eğitim müfredatı nasıldır ve hangi dersler verilmektedir?
- Pastacılık ve ekmekçilik alanında istihdam edilen öğretim elemanları ve öğretim üyelerinin lisans, yüksek lisans ve doktora mezuniyet alanları nelerdir?

Yapılan literatür taraması sonucunda ve elde edilen bilgiler doğrultusunda Türkiye’de 6 yükseköğretim kurumunun var olduğu saptanmıştır. Bu kurumlar, Marmara Bölgesi (İstanbul, Sakarya), İç Anadolu Bölgesi (Karaman, Ankara) ve Akdeniz Bölgesi’nde (Antalya) eğitim vermektedir. Kurumların geneline bakıldığında toplamda 14 Öğr. Gör. olduğu 1 tane de Dr. Öğr. Üyesi olduğu saptanan diğer bulgular arasındadır. Akademisyenlerin mezun oldukları lisans, yüksek lisans ve doktora mezuniyet alanları incelendiğinde en fazla gastronomi ve mutfak sanatları bölümünden mezun olanların olduğu tespit edilmiştir. Bunun sebebi gastronomi ve mutfak sayısı veren kurum sayılarının hızla artması ve mezun vermesi şeklinde açıklanabilir. Bu bölümü 2. sırada gıda mühendisliği, 3. sırada ise turizm işletmeciliği bölümü takip etmektedir. Pastacılık ve ekmekçilik bölümünün ders müfredatları incelenmiş ve 2 farklı kategoride değerlendirmiştir. Bu kategoriler uygulamalı dersler ve teorik dersler altında temalar verilerek yorumlanmıştır. Uygulamalı dersler genellikle unlu mamuller kapsamında verilirken teorik dersler daha çok gastronomi kapsamında verilmiştir. Üniversitelerin uygulamalı ve teorik ders dağılımlarının dengeli bir şekilde dağıldığı da göze çarpan diğer bulgular arasındadır.

Mezunların üniversite eğitimleri sırasında iş bulmaları gibi beklentileri önemlidir. Bu beklentilere dayalı olarak tasarlanan bir öğrenme çerçevesi, mezunların profesyonel yaşamlarına ve iş aramalarına uyum sağlamalarında da hızlandırıcı bir etkiye sahip olacaktır. Bu nedenle hazırlanan müfredata sektör beklentilerinin dahil edilmesi, öğrenciler ve sektör açısından olumlu sonuçlar doğuracaktır.

Öğrencilere konu alanıyla ilgili uygun teorik ve pratik donanımın sağlanması da fakültenin ve meslek yüksek okullarının öncelikleri arasında olmalıdır (Akmeře, 2021).