

CULINARY CROSSROADS:

GASTRONOMY, INNOVATION,
AND THE TOURIST EXPERIENCE

EDITORS:
MUHAMMET ERBAY
GÜLÇİN ALGAN ÖZKÖK

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Editors: Muhammet Erbay, Gülçin Algan Özkök

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PREFACE

The dynamic field of tourism is continuously evolving, with gastronomy tourism occupying a pivotal role in this transformation. It is with great pleasure that I introduce this comprehensive volume, which delves into the intricate and multifaceted intersections between gastronomy and tourism. This book endeavors to provide an in-depth examination of the innovative trends, technological advancements, and cultural significance that shape this vibrant sector.

The first chapter, *The Role of Molecular Gastronomy in Planning Food and Beverage-Based Tourism Demand*, explores the profound impact of molecular gastronomy on the tourism industry. It underscores the pivotal role of molecular culinary techniques in creating unique and scientifically grounded gastronomic experiences that drive tourism demand.

In the second chapter, *New Trends in Gastronomy: Impact of Global Changes and Innovative Approaches*, the focus shifts to the ever-changing landscape of gastronomy. This chapter examines how global changes and innovative approaches are transforming traditional food cultures, offering novel taste experiences and pushing the boundaries of culinary art.

Chapter three, *Innovation in the Kitchen: Evaluation of Artificial Intelligence Applications*, delves into the transformative power of artificial intelligence in gastronomy. From nutritional evaluation to kitchen automation and personalized nutrition recommendations, this chapter provides a detailed analysis of how AI is revolutionizing the food and beverage industry.

The fourth chapter, *Evaluation of Fennel (Foeniculum Vulgare) Plant in Terms of Its Use in Turkish Cuisine*, offers a fascinating exploration of the fennel plant's culinary and nutritional significance. This chapter highlights the importance of utilizing local and sustainable ingredients within the context of Turkish cuisine.

In the fifth chapter, *Assessment of Zengibar Walking Route within the Context of Ecotourism and Tourism Development*, the focus broadens to encompass the field of ecotourism. This chapter evaluates the potential of the Zengibar Walking Route in Konya, emphasizing its historical, cultural, and natural significance as a prime ecotourism destination.

Chapter six, *Living Kitchen Trend*, introduces the innovative concept of the Living Kitchen movement. This chapter explores how this trend enhances the gastronomic experience by engaging tourists in interactive culinary practices that highlight local food culture and traditions.

The final chapter, *The Effects of Social Media and TV Programs on Gastronomy Tourism*, examines the powerful influence of digital media on gastronomy tourism. This chapter analyzes how social media platforms and television programs shape food and beverage culture, influencing tourism demand and destination selection.

Collectively, these seven chapters provide a holistic and insightful perspective on the multifaceted world of gastronomy tourism. This volume aspires to inspire further research, innovation, and collaboration in this exciting field, ultimately contributing to the sustainable development of tourism and the preservation of our rich culinary heritage.

In closing, I extend my deepest gratitude to the esteemed authors of each chapter. Their scholarly contributions and dedication to advancing the field of gastronomy tourism have been instrumental in the creation of this book. It is my hope that their work will inspire readers and serve as a valuable resource for academics, industry professionals, and all those interested in the dynamic interplay between gastronomy and tourism.

Sincerely,

Editors:

Muhammet ERBAY

Gülçin ALGAN ÖZKÖK

THE ROLE OF MOLECULAR GASTRONOMY IN PLANNING FOOD AND BEVERAGE-BASED TOURISM DEMAND

Hasan Ali Erdoğan¹, Yılmaz Seçim², Kadir Berkay Yarıcı³

1. Introduction

Tourism is a rapidly growing industry that directly shapes the social, economic and environmental structure. Attractiveness, the first and main influential component of the tourism industry, plays a decisive role in shaping development. Due to its purely subjective nature, attractiveness paves the way for changes in the tourism system to depend on many different actors that trigger each other. One of these actors is the catering industry, which influences tourism as an important driver of development. Studies evaluating food and beverages as touristic products, linking agricultural production, tourism supply and tourism economy date back to the early 1970s and 1980s. Today, gastronomy products show themselves as a touristic product as an attractive element of cultural tourism. Local and established foods, which emphasize cultural difference, authenticity and sense of place, thus facilitating competitive advantage for destinations, can also be an important destination. In recent years, it has often been emphasized that the gastronomy experience is a useful tool in creating market destinations and market diversification by centralizing the gastronomy tourism experience in order to attract more tourists and work more.

Given the global interest in food, which is emerging as a strong and important tourism segment, it is clear that the tourist experience is complex and needs to be thoroughly addressed from both the demand and supply side. Good food and beverage and a good environment can be the key to creating a sustainable experience rather than a one-time experience. Therefore, the food or beverage consumed, the location or setting, the service situation, innovation and authenticity should be considered as tourist products. Sensory and emotional connections, social and interpersonal connections, novelty and experiential connections, focus, attention and reflective connections are all important for a gastro-experience to be memorable. Also, optimizing the nutritional value of food and beverages and their impact on health is another detail that has recently been demanded. Molecular gastronomy makes it possible to create new and unique flavors and textures through methods such as sous-vide, spherification, emulsification and foaming, and to cook food at low temperatures and for long

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periods of time while preserving delicate textures. It can be predicted that the benefits that molecular gastronomy and its techniques can offer to tourism can increase demand trends (i.e. tourist behavior) as a universal component.

As the culinary ecosystem becomes an important part of the tourism industry, it is necessary to focus on building partnerships, collaboration and strong solidarity networks to develop healthy and unique tourist products and experiences. The innovations offered by molecular cuisine require large-scale and multifaceted collaborations, not only in the field of gastronomy, but also in health, food science and nutrition. To manage this multicomponent process and to establish the sustainability of the demand for gastro-tourism, a clear vision and participatory effort of the integration of molecular gastronomy and its techniques into the industry is needed.

The main purpose of this study is to reveal the potentials and possibilities for molecular gastronomy to be brought more actively into the tourism industry in creating new, different and science-based alternatives to increase demand trends in gastro-tourism. Thus, to demonstrate the capacity of molecular gastronomy applications to offer a wide range of creative possibilities for both tourism businesses and individual enthusiasts with the infrastructure it creates to explore new taste profiles and textures. This paper aims to comprehensively examine the basic principles of molecular culinary techniques, their impact on gastronomy practice, and the potential future development areas of this field. The outputs of the study contribute to furthering the sustainable demand trends that are the lifeblood of tourism by introducing a complementary production system for gastronomy tourism. Research and Publication Ethics were followed in this study.

2. Conceptual Framework

By describing the current situation about touristic product, gastronomic product and molecular cuisine, the subject was discussed in a conceptual framework with references from the literature.

2.1. Touristic Product

Planning is an essential element of successful tourism development and management. Especially accurate forecasting of demand is a tool that directly affects the success of tourism planning and therefore ensures the survival of the sector. The determinant actor of touristic demand is the touristic product. It is seen that the touristic product has an important place in tourism planning.

An industry is characterized by a general product and production process. The acceptance of tourism as an industry is related to the existence of a product and product process. Medlik and Middleton conceptualize tourism products as the set of activities, services and benefits that make up the entire tourism

experience and state that the product consists of five components: destination attractions, destination facilities, accessibility, visuals and price. This conceptual model is frequently referenced by other authors such as Wahab, Crampon and Rothfield, Schmoll and Gunn. Middleton defines the term ‘tourist product’ on two different levels: the ‘specific’ level, which is more specific, such as an airplane seat, and the ‘total’ level, which is all the experiences from the beginning of the trip until the moment of return.

Table 1: Functions of the Touristic Product

Primary Production (Sources)	Intermediate Inputs (Facilities)	Intermediate Outputs (Services)	Final Result (Experience)
-Soil	-Parks	Park narration	-Recreation
-Labor Force	-Holiday villages	-Guidance services	-Social persons
-Su	-Transport vehicles	-Cultural shows	-Education
-Agricultural products	→ -Museums →	-Souvenirs	-Relaxation
	-Craft shops →	-Procedures	-Remembrances
	-Convention centers	-Performances	-Business connections
-Fuel	-Hotels	-Invitations	
-Building	-Restaurants	- Food and drinks	
-Capital	-Rental vehicle fleets	- Festivals and events	

Source: Stephen L.J. Smith, The tourism product. *Annals of Tourism Research* 21(3), 1994, 582-595.

With the functions of the tourism product in Table 1, Smith seems to emphasize the concept of the tourism product as a means to bridge the production-consumption links: it starts with upstream activities (primary production or resources) and ends with a downstream activity. According to Smith, the consumer experience is the result of the tourism product and creates unending values between the product, distribution, purchasing activities and the customer.

On the other hand, Jefferson and Lickorish defined the tourism product as ‘a collection of physical and service features and symbolic associations that are expected to meet people’s wants and needs’. According to Olali, a tourism product is a combination of various services such as transportation, accommodation, food, beverage and entertainment. Touristic products generally include services that are subjective rather than objective. Therefore, it is difficult for touristic products to reach a standard quality. They cannot be stored and it is also very difficult to adapt supply to demand because they are inflexible. On the other hand, an element of attraction that will generate tourism activity can also be considered as a tourist product.

In this respect, it is seen that researchers in the academic field are based on different bases as a touristic product and divide tourism into types accordingly (Table 2).

Table 2: Types of Touristic Product Based Tourism

Types of Tourism	Product	Source
Rural-rural tourism	Rural life, nature	(Pesonen, Komppula, Kronenberg, & Peters, 2011)
Agro-agricultural tourism	Agriculture life	(Phillip, Hunter, & Blackstock, 2010)
Culture-culture tourism	Cultures and cultural products	(McKercher, 2002; McKercher & du Cros, 2003)
Mountaineering tourism	Mountains and mountain climbing activity	(Pomfret, 2006)
Backpacking-backpacker Tourism	Freedom, carefree wanderings, romantic pastimes, adventure	(Chen, Bao, & Huang, 2014)
Bird Watching-birding	Birds and their mysterious lives	(Chen & Chen, 2015)
Golf tourism	Recreative activities such as golf	(Kim & Ritchie, 2012)

On the other hand, it is not surprising that some researchers have also traced the search for tourism that develops with the attractive effect of gastronomy products.

2.2. Molecular cuisine as a gastronomic product

In the current literature, the gastronomic product has been defined in different ways, as an interdisciplinary subject linked to many different fields such as anthropology, agriculture and sociology. 'Gastronomy' is etymologically composed of the Ancient Greek terms 'gastro-' meaning 'stomach' and 'nomos' meaning 'knowledge or law', which in fact means 'knowledge/law of the stomach'. A gastronomic product is defined as a product that provides information about the culture and people of a destination related to the preparation and eating of food.

By creating themed experiences for consumers, creating value for the demand for gastronomic products and creating gastronomy-based travel experiences for the growth of food with communities, the gastronomic product contributes to three areas: (1) regional/local development, (2) sustainability and (3) deep integration with local food systems. Gastronomic product development strategies are also supported by local agri-food policies as they can help agriculture and food industries. In particular, the gastronomic product brings to light the host culture, heritage and traditions while developing a sense of pride and ownership in the local community.

In addition to stimulating the agricultural sector by increasing local production, the gastronomic product is considered an important potential mechanism for keeping tourism revenue in the region and increasing the

distribution of tourism benefits or value creation to visitors and the local community. In this respect, the gastronomic product helps the sustainability of the destination and its role in its marketing is of high importance. After all, more than 33% of the money spent by tourists is spent on food. Food and food-related activities are an important source of tourism and gastronomic products are becoming an important component in motivating destination choice. Therefore, food services offered in catering establishments need to follow food trends to meet guests' expectations. Among the trends in the catering market, molecular cuisine is reported to be prominent.

Molecular cuisine can be defined as an interdisciplinary field that studies the physical and chemical transformations of food and translates this scientific knowledge into innovative gastronomic practices. This field draws on fundamental sciences such as molecular biology, chemistry, physics and engineering to understand the phenomena that occur during the preparation and consumption of food. Molecular cuisine has revolutionized the world of gastronomy by redefining traditional cooking methods. The term molecular cuisine was first defined in 1988 and aims to investigate the mechanisms of phenomena that occur during the preparation and consumption of food. This discipline studies physical and chemical changes to optimize the texture, aroma and flavor of food. For example, the sous-vide technique allows food to be cooked at low temperature for long periods of time, preserving delicate textures while retaining their nutritional value. The spherification technique creates unusual and aesthetic presentations by transforming liquids into gelatinous spheres.

The importance of molecular cuisine is not only seen in gastronomic innovations, but also in the fields of health and nutrition. Molecular gastronomy techniques contribute to the development of healthy eating habits by preserving and even increasing the nutritional value of foods. Furthermore, molecular cuisine plays an important role in designing personalized nutrition plans and diets, allowing the development of an in-depth understanding of the components of foods. Molecular cuisine also has the potential to reduce food waste. By optimizing the chemical and physical properties of food, it can make it last longer and generate less waste. This is a huge advantage for sustainable food production and consumption. Molecular cuisine is a field that is redefining the relationship between science and gastronomy, with far-reaching implications for both culinary art and food science and nutrition. The innovations offered by this discipline aim to optimize not only the taste and texture of foods, but also their impact on health. In this context, molecular cuisine is of great importance for future gastronomic practices and the development of healthy eating habits.

2.3. History and development of molecular cuisine

Molecular cuisine can be defined as an interdisciplinary field that emerged with the aim of understanding the physical and chemical transformations of food and translating this scientific knowledge into innovative gastronomic practices. The origins of this field date back to the late 1980s and early 1990s. The term was first coined in 1988 by French chemist Hervé This and Hungarian physicist Nicholas Kurti. They sought to develop a scientific approach to the study of the chemical and physical changes that occur during the cooking of food. Molecular gastronomy, which was officially introduced for the first time in 1992 at an international symposium in Erice, Sicily, has attracted the attention of many chefs and scientists around the world. The development process of molecular cuisine gained great momentum especially in the 2000s. In this period, names such as Spanish chef Ferran Adrià, British chef Heston Blumenthal and American chef Grant Achatz drew attention by applying molecular gastronomy techniques in their kitchens. By combining traditional cooking methods with scientific principles, chefs have created unique flavors and textures. For example, Adrià's restaurant El Bulli is considered one of the most important centers of molecular gastronomy, while Blumenthal's The Fat Duck restaurant has similarly gained a reputation for its innovative culinary techniques.

Ferran Adrià has become a leading figure in molecular gastronomy with the innovative techniques and creative presentations he has developed at his restaurant El Bulli. The techniques used in Adrià's kitchen involve various physical and chemical processes to optimize the texture, aroma and taste of food. At The Fat Duck restaurant, Heston Blumenthal is known for his cooking methods backed by scientific principles. Blumenthal is particularly known for his low-temperature cooking and sous-vide techniques and has popularized these techniques in the culinary arts. At the same time, Herve This's work established the scientific foundations of molecular gastronomy, enabling chefs to integrate this knowledge into their kitchens. Names such as Spanish chef Ferran Adrià, British chef Heston Blumenthal and American chef Grant Achatz have attracted attention by applying molecular gastronomy techniques in their kitchens. Harold McGee's 'On Food and Cooking' has been a fundamental resource for understanding the chemical and physical changes in the cooking process. At the same time, Herve This's work established the scientific foundations of molecular gastronomy, allowing chefs to integrate this knowledge into their kitchens.

2.4. Key features of molecular cuisine

Molecular cuisine is a discipline that pushes the boundaries of gastronomic experiences by manipulating the chemical and physical properties of foods. Techniques used in this field include making various changes to the chemical

composition and physical structure of foods to optimize their textural and flavor profiles. Here, physical properties include the texture, density, viscosity and thermal properties of foods. These properties play an important role in cooking and presentation processes. For example, viscosity and density are among the physical properties of the steal molasses produced in the Tokat region. Likewise, changes in the physical properties of potatoes according to storage conditions are examples of studies in this field. Chemical properties determine the nutritional value, flavor and safety of foods. Chemical components include water content, proteins, fats, carbohydrates, vitamins and minerals. These components affect the nutritional value and functionality of foods. For example, the chemical properties of Van herb cheeses include their protein, fat and salt content. The chemical properties of tomato paste are similarly evaluated. Molecular cuisine also optimizes the flavor profile and nutritional value of foods by controlling biochemical reactions and enzymatic reactions involved in food ripening and spoilage. For example, proteases and lipases contribute to flavor and texture development through proteolysis and lipolysis reactions during the ripening process of cheeses.

In terms of sensory properties, foods are determined by factors such as taste, smell, texture and appearance. These characteristics directly influence consumer preferences and food quality. Sensory analysis is used to assess the acceptability of foods, which plays an important role in product development processes. For example, the sensory characteristics of cheeses produced from different types of milk have an impact on the flavor and acceptability of the cheese. Molecular cuisine explores ways to preserve and enhance the nutritional value of foods. This means making foods healthier and developing functional foods. For example, some molecular gastronomy techniques can preserve bioactive components in foods and increase their bioavailability. Understanding the physical and chemical properties of foods in molecular cuisine shows how these properties can be manipulated in creative and innovative culinary applications. This knowledge enables industry to create gastronomic experiences and respond to consumer expectations through emulsification and gelatinization applications (Table 3).

Emulsification is a process of mixing two or more immiscible liquids. It usually occurs when one liquid is dispersed in small droplets in another liquid. In this process, normally immiscible liquids, such as water and oil, use surfactants called emulsifiers to form a stable mixture. Emulsifiers are molecules with hydrophobic (water- hating) and hydrophilic (water-loving) ends. This dual property allows emulsifiers to wrap around oil droplets and remain stable in water. Thus, emulsions can remain intact over time.

Table 3: Applications in Molecular Cuisine

Application	Examples of use cases
Emulsification	<i>Food Industry:</i> Margarine, ice cream, mayonnaise, salad dressings and dairy products; <i>Cosmetics and Personal Care Products:</i> Creams, lotions, shampoos and make-up products; <i>Pharmaceuticals:</i> especially oral and topical drug forms; <i>Industrial Applications:</i> Paints, inks, lubricants and cleaners
Gelatinization	<i>Bakery products:</i> Bread, cakes and other bakery products; <i>Sauces and soups</i> for thickening; <i>Prepared foods:</i> Pasta, puddings and other fast foods; <i>Confectionery; Ice cream and dairy products</i>

Source: (McClements, 2015; Atwell, Hood, Lineback, Varriano-Marston, & Zobel, 1988)

Gelatinization is the process by which starch granules swell and dissolve in the presence of water and heat. In this process, starch molecules absorb water and their crystal structure is disrupted, causing the granules to swell and starch polymers to disperse in water. A certain temperature threshold is required for gelatinization to begin; this temperature varies depending on the type of starch. The stages are: *swelling*, when the starch granules absorb water and swell and their semi-crystalline structure begins to break down; *loss of crystallinity*, when the regular crystalline structure of the granules is completely destroyed and they become amorphous as they continue to swell; *dissolution and viscosity increase*, when the starch polymers dissolve in water to form a viscous gel.

Table 4: Techniques Used in Molecular Cuisine

Technical	Tools and Method	Examples
Foam Creation	<i>Mixer or Whisk</i> Foams can be obtained using a simple mixer or whisk. This method allows the liquid ingredients to mix with air and create bubbles. This technique is commonly used in making classic meringue or whipped cream. (Dufresne & Farnworth, 2001)	<i>Lemon Foam</i> A light and refreshing foam made with lemon juice, sugar and lecithin. A mixture of lemon juice and sugar is mixed with lecithin and foamed under pressure in a siphon bottle. <i>Chocolate Foam</i> A mixture of chocolate and cream is foamed by adding albumin or gelatin. This method transforms the intense flavor of chocolate into a light and airy texture .
	<i>N2O Cartridges and Siphon</i> In this method, liquid placed in a siphon flask is foamed under pressure with N2O gas. This technique is particularly ideal for creating light and airy foams and is frequently used in molecular gastronomy. (Cousins, 2011)	
	<i>Liquid Nitrogen</i> Liquid nitrogen is used to instantly freeze and shape some foams. This method is particularly used to create cold and frozen foams, providing dramatic presentations. Caporaso, 2021	
Spherification	<i>Sodium alginate and lactate</i> The liquid is mixed with sodium alginate and dripped into the calcium lactate solution. This process creates a gel membrane around the liquid. (Santos, 2015)	<i>Mango Caviar:</i> Mango puree is mixed with sodium alginate and dropped into a solution of calcium lactate. This allows the mango caviar to form into small, gelatinous globules. <i>Yogurt Globules</i> Yogurt is mixed with calcium lactate and dropped into a solution of sodium alginate. This keeps the yogurt in a gelatinous membrane and forms globules that burst in the mouth .
	<i>Reverse Spherification</i> In this method, liquid mixed with calcium lactate is dripped into the sodium alginate solution. This technique is more suitable for acidic or alcohol-containing liquids, as these liquids do not react directly with sodium alginate . (Santos, 2015)	

Foaming and spherification techniques are commonly used in molecular cuisine (Table 4). Foaming is a process of injecting air or other gas into a liquid or semi-solid substance. This technique is used to increase the volume of dishes and create unique textures. Foams are usually created using stabilizers such as lecithin, albumin (egg white protein), gelatin or agar. Spherification is a technique in which liquids are coated with a gel membrane to form liquid globules. There are two methods of spherification: basic spherification and reverse spherification (Norton, 2013). This technique is more suitable for acidic or alcohol-containing liquids, as these liquids do not react directly with sodium alginate (Santos, 2015).

2.5. Impact of molecular gastronomy applications on industry

The applications of molecular culinary techniques already offer important outputs for different industries. By its very nature, molecular gastronomy is a field that is constantly evolving with technological developments and scientific innovations. Research in this field in Latin America shows that new techniques and scientific methods are revolutionizing food preparation. For example, in Colombia, work in the field of food engineering has focused on the discovery of new compounds and enzymes that allow a wider range of molecular gastronomy techniques to be applied. Furthermore, research in Brazil on the use of 3D printing technology in the food sector reveals how this technology can be used to create unique and complex food structures through layered construction processes.

In molecular cuisine, 3D printer technology enables food to be prepared through layered construction processes. This technology involves building food layer by layer according to predetermined shapes and structures. 3D printers can create complex and detailed structures by stacking food ingredients in thin layers. This process allows for great flexibility in food design and production and offers chefs unlimited creative possibilities. Furthermore, this technology has made it possible to produce food suitable for personalized nutrition programs and special diets. 3D printing technology allows food to create unique and complex structures. Thanks to this technology, full control over the internal structure and texture of food can be achieved. For example, different fillings and layers can be created on the inside of foods such as chocolate, pastries and meat products. This will allow for dishes that are rich in both visual appeal and flavor and texture combinations. 3D printers also have the potential to reduce food waste by using natural resources more efficiently.

Famous chefs have used molecular gastronomy to bring a new dimension to the art of cooking. Ferran Adrià, Heston Blumenthal and Grant Achatz are among the pioneers of molecular gastronomy. Ferran Adrià has presented creative dishes using spherification and foaming techniques in his restaurant

elBulli. Molecular gastronomy is also used in restaurants to offer experimental dishes. This approach ensures that the dishes are memorable both visually and in terms of taste. By using molecular techniques, restaurants offer their guests extraordinary experiences. For example, Grant Achatz's Alinea restaurant offers guests a dining experience full of surprise elements and innovative presentation techniques. Such restaurants combine the art of cooking with a scientific approach to create new and exciting dishes. Molecular gastronomy is becoming applicable not only in professional kitchens but also in home kitchens. Kitchen tools and kits developed in Latin America allow amateur cooks to experiment with molecular techniques at home, while home spherification kits and liquid nitrogen devices produced in Argentina demonstrate the wider reach of these techniques.

3. Conclusion, Evaluation and Recommendations

Among the outcomes of the study are the innovations that molecular cuisine techniques offer in the world of gastronomy, as well as their potential impact on food science and health. However, it is seen that molecular cuisine redefines traditional cooking methods and bridges the gap between modern gastronomy and science by studying the physical and chemical transformations of food and beverage elements that are the subject of tourism. Techniques such as sous-vide, spherification, emulsification and foaming allow chefs and food enthusiasts to create previously unimaginable flavors and textures. Beyond optimizing the aesthetic and sensory experience of food, molecular cuisine makes significant contributions in areas such as preserving and enhancing nutritional value and promoting healthy eating habits. In particular, techniques such as prolonged cooking at low temperatures allow for the preservation of delicate textures while maintaining the nutritional value of food. Furthermore, techniques such as spherification and foaming make the presentation of food more attractive and offer new and interesting experiences in the world of gastronomy.

Molecular gastronomy is having far-reaching impacts not only in the world of gastronomy, but also in health and nutrition sciences. These techniques contribute to the development of healthy eating habits by preserving and even increasing the nutritional value of foods. Furthermore, molecular culinary techniques have significant potential for reducing food waste and sustainable food production. By optimizing the chemical and physical properties of foods, they can make them last longer and generate less waste. In conclusion, molecular cuisine has revolutionized the world of gastronomy by radically changing the way food is prepared. This discipline aims to optimize the taste, texture and nutritional value of food, redefining the relationship between science and gastronomy. The innovations offered by molecular cuisine are of great importance for future gastronomic practices and the development of healthy eating habits.

Molecular gastronomy products, as Medlik and Middleton and Olalı state, should be priced in attractive and accessible places with attractive visuals and designed on the spot. They should be special like ‘airplane seats’ as Middleton puts it, and as Jefferson and Lickorish put it, they should be products that meet people’s needs to experience the different and to live healthy.

Restaurants and the catering industry can enrich customer experiences and gain a competitive advantage by incorporating molecular culinary practices into their menus. Furthermore, the integration of molecular gastronomy techniques into home kitchens should be encouraged. Kitchen appliances, such as household spherification kits and liquid nitrogen devices, can help these techniques reach a wider audience. Informative content about molecular gastronomy should be shared on media and social media platforms to increase consumer awareness. In this way, molecular kitchen techniques can be popularized and reach a wider audience. Modern food trends have strongly influenced the range of dishes served in restaurants around the world. With lifestyles and habits constantly changing, it is important to keep up with new gastronomic trends so that restaurants can adapt their products to these new trends.

Nowadays, there is more and more emphasis on health and it is important to use organic products in the preparation of meals and to adapt recipes to these new trends in order to meet the needs of the entire tourist population, whatever their food preferences. Some recommendations for future research and applications are in order. First, comprehensive training programs and workshops should be developed for wider adoption and application of molecular culinary techniques. These programs should be organized to teach molecular gastronomy techniques to both professional chefs and food enthusiasts and highlight the potential benefits of these techniques. In addition, studies should be conducted to examine the health impacts and sustainability aspects of molecular culinary techniques. These studies can help us better understand the potential benefits and possible risks of molecular gastronomy. In particular, the use of molecular techniques to improve the nutritional value of food and reduce food waste should be emphasized.

As a result, molecular cuisine has ushered in a new era in the world of gastronomy, combining the art and science of cooking. The innovations offered by this discipline aim to optimize not only the taste and texture of food, but also its impact on health. The future development of molecular gastronomy should be supported by innovations in education, research and practice, aiming to maximize the potential benefits in this field.

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REFERENCES

- Ab Karim, S., & Chi, C. G. (2010). Culinary Tourism as a Destination Attraction: An Empirical Examination of Destinations' Food Image. *Journal of Hospitality Marketing & Management, 19*(6), 531-555. doi:10.1080/19368623.2010.493064
- Abrams, J. (2013). Mise en plate: the scenographic imagination and the contemporary restaurant. *Performance Research, 18*(3), 7-14.
- Adrià, F. (2008). *A Day at elBulli: An Insight into the Ideas, Methods and Creativity of Ferran Adrià*. London: Phaidon Press.
- Afonso, C., Silva, G. M., Gonçalves, H. M., & Duarte, M. (2018). The role of motivations and involvement in wine tourists' intention to return: SEM and fsQCA findings. *Journal of Business Research, 89*, 313-321. doi:10.1016/j.jbusres.2017.11.04
- Alonso, A. D., Kok, S., & O'Brien, S. (2018). Sustainable culinary tourism and Cevicherias: a stakeholder and social practice approach. *Journal of Sustainable Tourism, 26*(5), 812-831.
- Atwell, W. A., Hood, L. F., Lineback, D. R., Varriano-Marston, E., & Zobel, H. F. (1988). The terminology and methodology associated with basic starch phenomena. *Cereal Foods World, 33*(3), 306-311.
- Azinuddin, M., Mior Shariffuddin, N. S., Mohd Hanafiah, M. H., Mat Som, A. P., & Wan Mohd Zain, W. M. (2022). A systematic literature review on tourism networks, knowledge transfer, absorptive capacity, and performance. *Asia-Pacific Journal of Innovation in Hospitality and Tourism, 11*(1), 179-218.
- Barham, P. (2001). *The Science of Cooking*. London: Springer.
- Barham, P., Skibsted, L. H., Bredie, W. L., Frøst, M. B., Møller, P., Risbo, J., . . . Mortensen, L. M. (2010). Molecular gastronomy: a new emerging scientific discipline. *Chemical reviews, 110*(4), 2313-2365.
- Belisle, F. J. (1983). Tourism and food production in the Caribbean. *Annals of Tourism Research, 7*(4), 497-513.
- Bilia, A. R., Piazzini, V., Guccione, C., Risaliti, L., Asprea, M., & Capecchi, G. (2012). Improving on Nature: The Role of Nanomedicine in the Development of Clinical Natural Drugs. *Planta Medica, 78*(18), 1954-1970.
- Blumenthal, H. (2006). *In Search of Perfection: Reinventing Kitchen Classics*. London: Bloomsbury Publishing.
- Bom Frøst, M., & Jaeger, S. R. (2010). Consumer-perceived aspects underlying food-related preferences: A review on individual differences and the influence of context. *Food Quality and Preference, 21*(8), 1017-1031.
- Boukas, N., & Ziakas, V. (2014). A chaos theory perspective of destination crisis and sustainable tourism development in islands: The case of Cyprus. *Tourism Planning & Development, 11*(2), 191-209. doi: 10.1080/21568316.2013.864995 .
- Chen, G., Bao, J., & Huang, S. S. (2014). Segmenting Chinese Backpackers by Travel Motivations: Segmenting Chinese Backpackers by Travel Motivations. *International Journal of Tourism Research, 16*(4), 355-367. doi:10.1002/jtr.1928
- Chen, L. J., & Chen, W. P. (2015). Push-pull factors in international birders' travel. *Tourism Management, 48*, 416-425. doi:10.1016/j.tourman.2014.12.011
- Cho, V. (2008). Linking location attractiveness and tourist intention. *Tourism and Hospitality Research, 8*(3), 220-224. doi:10.1057/thr.2008.20.
- Crosby, G. (2020). *Cook, taste, learn: How the evolution of science transformed the art of cooking*. NY: Columbia University Press.
- Deveci, B., Turkmen, S., & Avcikurt, C. (2013). Relation of rural an gastronomy tourism an example of Bigadiç. *International Journal of Social and Economic Sciences, 3*(2), 29-34.
- Dixit, S. K. (2019). Gastronomic Tourism: A Theoretical Construct. In S. K. Dixit, *The Routledge Handbook of Gastronomic Tourism* (pp. 13-23). London: Routledge.
- Dixit, S. K., & Prayag, G. (2022). Gastronomic tourism experiences and experiential marketing. *Tourism Recreation Research, 47*(3), 217-220.
- Du Rand, G. E., Heath, E., & Alberts, N. (2003). The role of local and regional food indestination marketing. *Journal of Travel and Tourism Marketing, 14*(3-4), 97-112.

- Dufresne, C., & Farnworth, E. (2001). Tea, Kombucha, and health: a review. *Food Research International*, 34(6), 407-421.
- Egilmez, G., & Tatari, O. (2012). A dynamic modeling approach to highway sustainability: Strategies to reduce overall impact. *Transportation Research Part A: Policy and Practice*, 46(7), 1086-1096. doi:10.1016/j.tra.2012.04.011 .
- Garanti, Z., & Stylianou, C. (2022). Opening the path of gastro-tourism cluster development: the case of Cyprus. *Worldwide Hospitality and Tourism Themes*, 14(5), 492-500.
- García, M. (2019). The Impact of Molecular Gastronomy on Modern Cuisine and Nutrition. *International Journal of Food Science & Technology*, 52(3), 123-130.
- Godoi, F. C., Prakash, S., & Bhandari, B. R. (2016). 3D printing technologies applied for food design: Status and prospects. *Journal of Food Engineering*, 179, 44-54.
- Gooding, E. B. (1971). Food Production in Barbados with Particular Reference to Tourism. In G. D. Associates, *The Tourist Industry in Barbados: A Socio-Economic Assessment* (pp. 73-116). Kitchener, Canada: Dusco Graphic PREZ.
- Gunn, C. (1972). *Vacationscape: Designing Tourist Regions*. Bureau of Business Research. doi:Austin
- Haid, M., & Albrecht, J. N. (2021). Sustainable tourism product development: An application of product design concepts. *Sustainability*, 13(14), 7957.
- Hall, C. M. (2008). *Tourism planning: Policies, processes and relationships, 2nd Ed*. Canada: Pearson Education.
- Hall, C. M., Sharples, L., Mitchell, R., Macionis, N., & Cambourne, B. (2003). *Food tourism around the world: Development, management and markets*. Boston: Butterworth.
- Haven-Tang, C., Thomas, A., & Fisher, R. (2022). To what extent does the food tourism 'label' enhance local food supply chains? Experiences from Southeast Wales. *Tourism and Hospitality*, 3(1), 153-160.
- Hjalager, A. M., & Richards, G. (2002). *Tourism and Gastronomy*. London: Routledge. Hjalager, A. M., & Richards, G. (2002). *Tourism and Gastronomy*. Routledge, London. Jefferson, A., & Lickorish, L. (1988). *Marketing Tourism*. Longman. doi:Harlow
- Jolliffe, L. (2016). Marketing culinary tourism experiences: In. M. & Sotiriadis, *The Handbook of Managing and Marketing Tourism Experiences* (pp. 363-378). Bingley: Emerald Group Publishing.
- Kaya, A., Aydemir, C., & Aydemir, S. (2013). Effect of different storage conditions on the quality of tomato paste. *Journal of Food Quality*, 36(2), 94-102.
- Kim, J. H., & Ritchie, B. W. (2012). Motivation-Based Typology: An Empirical Study of Golf Tourists. *Journal of Hospitality & Tourism Research*, 36(2), 251-280. doi:10.1177/1096348010388661
- Kim, Y. G., & Eves, A. (2012). Construction and validation of a scale to measure tourist motivation to consume local food. *Tourism Management*, 33(6), 14581467.
- Kivela, J., & Crotts, C. J. (2006). Gastronomy's influence on how tourists experience a destination. *Journal of Hospitality and Tourism Research*, 30, 354.
- Kivela, J., & Crotts, J. C. (2006). Tourism and gastronomy: Gastronomy's influence on how tourists experience a destination. *Journal of hospitality & tourism research*, 30(3), 354-377.
- Köse, Ş. (2014). Production Technique, Chemical and Microbiological Properties of Van Herbed Cheese. *Kafkas University Veterinary Faculty Journal*, 20(5), 747-752.
- Kuhn, T. (2016). The Evolution of Molecular Gastronomy. *Journal of Culinary Science & Technology*, 14(4), 321-335.
- Kurt, G., & Dlużewska, A. (2018). Gastro tourism potential and perspectives for Turkey - A theoretical approach. *Czasopismo Geograficzne*, 59(1-2), 121-137.
- Kurti, N., & This, H. (1994). Molecular gastronomy. *Scientific American*, 270(4), 66-71.
- Lin, L., & Mao, P. C. (2015). Food for memories and culture-A content analysis study of food specialties and souvenirs. *Journal of Hospitality and Tourism Management*, 22, 19-29.
- Lipton, J., Cutler, M., Nigl, F., Cohen, D., Lipson, H., & Lipson, M. (2015). Additive manufacturing for the food industry. *Trends in Food Science & Technology*, 43(1), 114-123.
- Madaleno, A., Eusebio, C., & Varum, C. (2018). Purchase of local food products during trips by international visitors. *International Journal of Tourism Research*, 20(1), 115-125.
- McClements, D. J. (2015). Emulsion design to improve the delivery of functional lipophilic components. *Annual Review of Food Science and Technology*, 6, 129-145.

- McGee, H. (2004). *On Food and Cooking: The Science and Lore of the Kitchen*. NE: Scribner.
- McGee, H. (2010). *Keys to Good Cooking: A Guide to Making the Best of Foods and Recipes*. London: Penguin Press.
- McKercher, B. (2002). Towards a classification of cultural tourists. *International Journal of Tourism Research*, 4(1), 29-38. doi:10.1002/jtr.346
- McKercher, B., & du Cros, H. (2003). Testing a cultural tourism typology. *International Journal of Tourism Research*, 5(1), 45-58. doi:0.1002/jtr.417
- McKercher, B., Okumus, F., & Okumus, B. (2008). Food tourism as a viable market segment: It's all how you cook the numbers. *Journal of Travel and Tourism Marketing*, 25(2), 137-148. doi:10.1080/10548400802402404
- Medlik, S., & Middleton, V. T. (1973). Product Formulation in Tourism. *Tourism and Marketing, Vol:13* (p. Berne). in AIEST.
- Merdol, T. K. (2016). Past, present and future of nutrition and dietetics. *Izmir Kâtip Çelebi University Journal of Faculty of Health Sciences*, 1(1), 1-5.
- Middleton, V. T. (1989). Tourist Product. In S. F. Moutinho, *Tourism Marketing and Management Handbook* (pp. 573-576). Prentice-Hall, Hempel Hempstead.
- Morgan, T. (2018, August). A Typology of Gastro Tourism Consumers: A Conceptual Classification of Gastronomic Tourists' Consumer Behavior. A Thesis Presented to The Honors Tutorial College Ohio University.
- Myhrvold, N., Young, C., & Bilet, M. (2011). *Modernist Cuisine: The Art and Science of Cooking*. London: The Cooking Lab.
- Olali, H. (1990). *Tourism Policy and Planning*. Istanbul: Institute of Business Economics Publications.
- Özbey, N., Koçak, M., & İnal, A. (2013). Determination of Physical and Chemical Properties of Çalma Molasses Produced in Tokat Region. *Academic Food*, 11(2), 16-24.
- Park, S., & Santos, C. A. (2017). Exploring the tourist experience: a sequential approach. *ournal of Travel Research*, 56(1), 16-27.
- Pérez, B., Martín, C., & Fernández, C. (2019). 3D printing for the food industry: A practical overview. *Food Science and Technology International*, 25(7), 542-553.
- Pesonen, J., Komppula, R., Kronenberg, C., & Peters, M. (2011). Understanding the relationship between push and pull motivations in rural tourism. *Tourism Review*, 66(3), 32-49. doi:10.1108/16605371111175311
- Phillip, S., Hunter, C., & Blackstock, K. (2010). A typology for defining agritourism. *Tourism Management*, 31(6), 754-758. doi:10.1016/j.tourman.2009.08.001
- Pomfret, G. (2006). Mountaineering adventure tourists: a conceptual framework for research. *Tourism Management*, 27(1), 113-123. doi:10.1016/j.tourman.2004.08.003
- Pratt, S., Suntikul, W., & Agyeiwaah, E. (2020). Determining the attributes of gastronomic tourism experience: Applying impact-range performance and asymmetry analyses. *International Journal of Tourism Research*, 22(5), 564-581.
- Quan, S., & Wang, N. (2004). Toward a structural model of the tourist experience: an illustration from food experiences in tourism. *Tourism Management*, 25, 297-305.
- Richards, G. (2015). Evolving gastronomic experiences: From food to foodies to foodscapes. *Journal of Gastronomy and Tourism*, 7(1), 5-17.
- Robinson, R. N., & Getz, D. (2016). Food enthusiasts and tourism: Exploring food involvement dimensions. *Journal of Hospitality and Tourism Research*, 40(4), 432-455.
- Rodriguez, A., Jimenez, M., & Castro, L. (2021). Advances in molecular gastronomy: Colombian perspectives. *Journal of Food Science and Technology*, 58(3), 1117-1130.
- Sánchez, R. (2014). The Foundations of Molecular Gastronomy: A Comprehensive Review. *Journal of Culinary Science & Technology*, 12(3), 197-210.
- Santich, B. (2004). The study of gastronomy and its relevance to hospitality education and training. *Hospitality Management*, 23, 15-24.
- Schmoll, G. A. (1977). *Tourism Promotion*. London: Tourism International Press.
- Searle, L., & Spence, C. (2002). *Modernist Cuisine: The Art and Science of Cooking, Volume 6*. NY: The Cooking Lab.

- Severini, C., Derossi, A., & Ricci, I. (2018). 3D food printing: a new perspective on the food design. *International Journal of Food Science & Technology*, *53*(1), 1-12.
- Sianipar, M. (2019). Effect of product, price, location and tourism promotion of interest in visiting Lake Toba tourist attraction. *Enrichment: Journal of Management*, *9*(2), 18-22.
- Silva, A. (2020). 3D Printing Technology in the Brazilian Food Industry: Innovations and Challenges. *Brazilian Journal of Food Technology*, *23*(1), e2019203.
- Sinclair, M. G., & Gursoy, D. (2016). A conceptual model of residents' support for tourism development in developing countries. *Tourism Planning & Development*, *13*(1), 1-22. doi: 10.1080/21568316.2015.1047531 .
- Smith, S. L. (1994). The tourism product. *Annals of Tourism Research*, *21*(3), 582-595.
- Stevenson, S. (2019). *The Science of Cooking*. In *Modernist Cuisine: The Art and Science of Cooking* (pp. 321- 360). NY: Cooking Lab.
- Stone, M. J., Migacz, S., & Sthapit, E. (2022). Connections between culinary tourism experiences and memory. *Journal of Hospitality and Tourism Research*, *46*(4), 797-807.
- Şengül, M., & Keleş, F. (2005). Investigation of physical and chemical properties of potato according to storage conditions. *Food*, *30*(2), 73-79.
- Telfer, D. J., & Hashimoto, A. (2013). Raising awareness of local food through tourism as sustainable development. In C. M. Gossling, *Sustainable Culinary Systems: Local Foods. Innovation. Tourism and Hospitality* (pp. 169-185). Oxford, England: Routledge.
- Testa, R., Galati, A., G., S., Di Trapani, A., & Migliore, M. G. (2019). Culinary tourism experiences in agri- tourism destinations and sustainable consumption- understanding Italian 'tourists' Motivations. *Sustainability*, *77*(17), 4588.
- Uysal, M. (1998). The determinants of tourism demand: A theoretical perspective. In D. Ioannides, & K. G. Debbage, *The economic geography of the tourist industry* (pp. 79-98). London: Routledge.
- Vega, C., & Ubbink, J. (2008). Molecular gastronomy: a food fad or science supporting innovative cuisine? . *Trends in Food Science & Technology*, *19*(7), 372-382.
- Wahab, S., Crampon, L. J., & Rothfield, L. M. (1986). *Tourism Marketing*. London: Tourism International Press. Williams, R. (2012). Pioneers of Molecular Gastronomy: Techniques and Innovations. *Journal of Modern Cuisine*, *9*(1), 58-67.

NEW TRENDS IN GASTRONOMY: IMPACT OF GLOBAL CHANGES AND INNOVATIVE APPROACHES

Gülçin Algan Özkök¹

INTRODUCTION

From ancient times to the present day, people have been engaged in gathering, hunting, animal husbandry and agriculture in order to meet their physiological needs. In every period, people have met their nutritional needs by utilizing the opportunities available to them with factors such as the geopolitical location of the geography they are in and climatic conditions. Societies living on the water's edge met their food and beverage needs by fishing and aquaculture, those living in the steppe by animal husbandry, and those living in lands with fertile soils by carrying out agricultural activities. However, over time, with the food and beverage industry that has developed considerably from the past to the present, nutrition has turned into an activity that is enjoyed rather than a physiological need (Erdem & Akyürek, 2017: 107; Trihas, Kyriakaki, & Zagkotsi, 2015, p. 1). This transformation emphasizes how food culture has changed to become a social interaction and sensory experience rather than just a biological need (Yüncü, 2015).

The modernization of traditional food cultures is the process of bringing the flavors of the past into the present and making them suitable for today's palates. This is sometimes based on changing the preparation and presentation techniques of dishes, and sometimes on the use of different ingredients. For example, the modernization of the Japanese sushi tradition, combined with western culinary influences, allows for the creation of innovative and original flavors. New culinary trends, which are constantly changing and developing in the world of gastronomy, have come to the fore by modernizing traditional food cultures and reshaping them with innovative approaches (Erdem & Akyürek, 2017: 107). These new trends offer different taste experiences by pushing the boundaries of culinary art. Modernizing traditional food cultures and combining them with innovative approaches provides diversity and richness in the world of gastronomy, allowing the discovery of creative flavors that appeal to everyone's palate. In this way, gastronomy becomes a constantly renewing and developing art, and culinary artists have the opportunity to constantly renew and develop themselves. Therefore, following and trying new culinary trends in gastronomy is a good opportunity to embark on a journey full of

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flavor. Innovative approaches allow culinary artists to unleash their creativity and create unusual flavors by combining unexpected ingredients. For example, the use of molecular gastronomy techniques in cooking pushes the boundaries of cooking and presentation, resulting in different and surprising flavors. Our perception of taste is built around social and cultural factors. Culinary trends are an important factor affecting our food preferences. A trend is a change in a field that is effective over a long period of time. Food trends are shaped according to people's needs and expectations. Therefore, it is correct to say that culinary trends are related to people's food preferences. The difference between trend and fashion is the duration of their influence. Fashion is an idea that lasts shorter than a trend, is popular and disappears immediately. To characterize an innovation as a trend, the rate of acceptance and the impact of other factors should also be taken into account.

The study offers a broad perspective on gastronomy by examining different culinary movements. The aim of this study is to examine the changes in the field of gastronomy and to investigate the gastronomy movements from the past to the present. For this purpose, the literature on the changes in the field of gastronomy has been reviewed and analyzed.

Modernization of Traditional Food Cultures and Innovative Approaches

Culinary movements are specific styles and trends that allow cooking and eating habits to change and evolve over time. These trends usually emerge during certain periods and remain popular for a certain period of time. The historical development of culinary trends is shaped by changes in people's eating habits, technological developments and cultural influences. The evolution of culinary cultures from ancient times to the present day has been shaped by social, economic, technological and cultural changes. This process paved the way for the emergence of refined cuisine in Europe, its spread to large masses and the emergence of different culinary movements (Aksoy & Üner, 2016, p. 1). The concepts related to the subject should be generally titled and defined, and opinions and evidence based on scientific literature on the concept should be presented. Tables, figures and/or pictures can be presented if necessary, depending on the content of the subject.

Refined Cuisine

Refined cuisine, which is of French origin and emerged in France, is a trend that emerged in France in the 17th century, which is expressed as the preparation and cooking of food with more care rather than meeting the basic needs of people (Tuğan, 2021). Among its features, careful selection of ingredients, cooking technique, aesthetic presentation and rich flavor have become important (Üner, 2023). Innovative/New Cuisine, it is a movement of change that began in France in the 1730s. It refers to a period when many chefs

and cookbook authors defined themselves as “new” or “modern”. The cookbook author Menon was the first author to use this movement by calling it “nouvelle cuisine” (new cuisine) in the 1742 edition of his book “Nouveau Traité De La Cuisine” published in 1739 (Aksoy & Üner, 2016). Nouvelle cuisine emerged as a modern interpretation of haute cuisine (Gillespie, 1994, p. 20). Nouvelle cuisine is a type of cuisine that is much shorter than classical cuisine menus and where chefs focus on freshness (Doğan, 2023, p. 9).

Fast Food

It is a production system that is based on the ability of people to meet their nutritional needs in a fast and practical way as a result of the decrease in the time they spend at home. The first business that contributed to the spread and development of this “fast food” trend was McDonald’s in the 1950s, and businesses such as Burger King and Kentucky Fried Chicken opened in the following years are the continuation of this trend (Yıldız & Yılmaz, 2020).

Avant-garde Cuisine Trend

It is a type of cuisine that emerged after 1960, also known as “progressive cuisine”. This movement symbolizes a new system in which different cooking methods come to the fore rather than classical cooking techniques, cooking time is shortened so that foods do not lose their taste and aroma, and they are prepared and served with the help of modern techniques (Ercan, 2021). The trend is to put forward something better and newer than the existing one. It emerged from the search for visuality, aesthetics and innovation (Ölmez, 2023, p. 242).

Fusion Kitchen

“Fusion cuisine” represents the trend of “fusion cuisine”, which consists of the interpretation of at least two cuisines together, combining and presenting the culinary cultures and techniques of different nations on the same plate, but in such a way that a single national characteristic does not dominate (Dilsiz, 2010). In other words, the concept of “fusion cuisine”, which means merging and combining, is the concept that expresses that the product resulting from the blending and presentation of the culinary cultures of at least two different nations in the same dish does not contain the characteristics of only one culture (Turan, Güliz, Ayduğ, Bayesen & Sünnetçioğlu, 2020, p. 335).

Molecular Gastronomy

Molecular gastronomy is a discipline that uses scientific methods to understand the molecular, physicochemical and structural changes in the preparation and consumption of food. This approach aims to optimize the taste, textures and presentation of food by examining the chemical and physical processes underlying cooking techniques (Akoğlu, Çavuş, & Bayhan, 2017, p. 44). Cömert & Güdek (2017) states that it is a trend that emerged as a

result of the efforts to understand the physiology of taste by integrating the science of chemistry and gastronomy and examining the transformations of foods during cooking. Molecular gastronomy is an interdisciplinary science that aims to understand the physical and chemical transformations in cooking processes by analyzing foods at the molecular level. The definition made by Sariođlan (2014) clearly reveals the main purpose of molecular gastronomy. Introduced in 1988, this concept allows the materials and techniques used in kitchens today to be re-evaluated on a scientific basis. According to Burke, This, & Kelly (2016), molecular gastronomy goes beyond the traditional methods used in the kitchen and contributes to the development of innovative and creative practices. According to Van Der Linden, McClements, & Ubbink et al. (2008: 247), molecular gastronomy, which is a branch of science that tries to understand how flavors are formed and how they change by examining the scientific transformations in the preparation process of food, aims to understand the physical and chemical properties of foods and to develop new methods in the kitchen. Molecular gastronomy is a discipline that aims to improve the taste and presentation of food by using scientific methods in the kitchen. Yıldız and Yılmaz (2020:27) call this discipline “science-based cooking” or “experimental cuisine”, which enables the creation of new and different flavors by understanding the physical and chemical changes in the cooking processes of foods.

The use of new technologies and techniques in professional kitchens has become widespread with molecular culinary applications. These developments include the understanding of the effect of different cooking methods on the properties of food, the development of new cooking methods and the research of new methods (Faat and Zainal, 2014), and equipment and technologies that include accurate time and temperature sensors to measure products with great precision (Fraser and Lyon, 2018). Molecular gastronomy is an approach to the preparation and presentation of food on a scientific basis, aiming to create new flavors and textures by modifying the molecular structure of foods. Techniques such as spherification, gelling, and foaming are among the most well-known applications of molecular gastronomy (Alpaslan, Tanrısever, & Tütüncü, 2018, pp. 107-108) According to Ivanovic et al. (2011), this discipline makes it possible to offer innovative and creative dishes beyond the traditional culinary understanding thanks to technological possibilities.

Neurogastronomy

Gordon M. Shepherd, a pioneer in the field of neurogastronomy, introduced this concept to the scientific world with his article published in *Nature* in 2006. Neurogastronomy is an interdisciplinary field that studies the relationship between sensory perception and neural processing of food. Studies in this field

show that food is not only a physiological need, but also a mental and emotional experience. According to Kurgun (2017), neurogastronomy investigates how all the sensory properties of food, including not only its taste but also its smell, texture and visual presentation, combine in the brain and affect the perception of flavor. As Shepherd emphasizes, the act of eating is not only a process that takes place in the mouth, but also a complex neural activity in the brain. In addition to the physical and chemical properties of food, the brain also processes visual and tactile stimuli such as presentation, colors, and tableware to form the perception of taste. Therefore, neurogastronomy aims to comprehensively study all the factors that influence the dining experience. By using this knowledge, restaurants are working to optimize the visual and taste characteristics of the dishes and offer customers a more memorable experience (Şahin, 2020; Şengül & Adabalı, 2023: 937). Interest in the field of neurogastronomy has increased in recent years, paving the way for the formation of internationally united interdisciplinary working groups. The International Society of Neurogastronomy, the most well-known of these groups, brings together experts from different disciplines such as experienced chefs, neuroscientists and clinical scientists to conduct research on topics such as nutritional behaviors, obesity and nutrition-related health problems. These studies aim to examine in detail the complex relationships between brain physiology and food perception in order to understand individual differences (Cankül & Uslu, 2020). Although applications in the field of neurogastronomy are not yet widespread today, they are attracting increasing interest in the gastronomy industry. The industry has started to use neuroscientific findings to better understand consumer behavior and optimize the taste experience. Restaurants are trying to improve their menus and presentations by examining the factors that influence individuals' sensory perceptions and taste preferences in order to meet customers' expectations and differentiate themselves. Restaurants such as Le Petit Chef, Ibiza Sublimotion and Fat Duck are among the pioneering organizations that offer innovative and interactive dining experiences by integrating neurogastronomy principles into their kitchens (Sarı, Dokuz Murat, Murat & Samancı, 2024).

Slow Food Movement

The slow food movement is a movement that emerged in Italy in 1986 under the leadership of Carlo Petrini as a reaction to the opening of McDonald's, one of the fast food restaurants, opposite the Spanish Steps in Piazzadi Spagna in Rome (Özmen, Birsen, & Birsen, 2016, p. 40; Keskin, 2020, pp. 58-59). Its basic philosophy is based on producing good, clean and fair food (Aydemir & Özdemir, 2014, p. 326). It advocates that the products grown in local regions and grown with traditional seeds and the dishes made with these products should be prepared with care and traditional methods and should be consumed

without rushing and savoring them (Özgürel & Avcıkurt, 2018, p. 572). It aims to prevent the disappearance of

traditional food cultures and promote local development (Yurtseven, Kaya, & Harman, 2010). Adopting the principle of good, clean, fair food is a very important issue in terms of sustainable gastronomy (Başarangil & Tokatlı, 2018, pp. 4-5). Although the slow food movement started in the field of gastronomy, sustainability not only in the field of gastronomy but also in other fields has led to the emergence of the slow movement (Ünal & Zavalı, 2016, p. 889). The main reason why the slow food movement (Slow Food) and the slow city movement (Cittaslow, Slow City) chose the snail as the logo is that it progresses slowly, restfully and with sure steps (Çoban & Harman, 2016, pp. 239-240; Coşar, 2013, p. 29).

Raw Nutrition

The raw diet movement is based on the belief that early humans maintained their health by consuming their food without cooking it before they discovered fire. This approach focuses on the idea that nutrients should not be lost and should be preserved in their natural form. While the origins of raw nutrition can be traced back to the 1800s, it is noteworthy that it has become particularly widespread and popular in the last 30 years. This diet has an important place in the process of questioning and redefining people's healthy lifestyles and diets (Karaman & Soyulu, 2020, p. 252).

This trend is a dietary style in which organic and chemical-free living foods such as fruits, vegetables and sprouted seeds are preferred and adopted for a healthy life (Sevinç & Çakmak, 2017, p. 149). In other words, it advocates consuming foods in their natural state as much as possible, without exposing them to high temperatures. Cereals and legumes have an important place in this approach. In particular, the germination process increases the nutritional value of these foods, resulting in products rich in protein, vitamins, minerals and dietary fiber. In addition, the germination process reduces the amount of anti-nutritional compounds in these foods, providing a healthier option in terms of nutrition. Therefore, germinating cereals and legumes or producing various foods with their flour in the raw nutrition program can make significant contributions to healthy nutrition (Okur & Madenci, 2019, p. 669).

Surf & Turf

Surf and turf is a gastronomic trend that combines seafood with red meat, with origins in the United States and Australia. This food presentation has gained popularity in restaurants in coastal areas, especially since the mid-20th century. The terms 'surf' and 'turf' represent the marine and terrestrial environments respectively, indicating that this combination aims to bring together different flavors. Today, surf and turf is a concept that is frequently

found on the menus of upscale restaurants around the world and is constantly evolving with the creativity of chefs. Surf & Turf is a food trend that has rapidly gained popularity in recent years in the modern world, especially in the United States and Australia (Akdağ, Özata, Sormaz, & Çetinsöz, 2016, p. 273). The basic idea of the Surf & Turf experience is that seafood and red meat are served on the same plate (Akdağ, 2016, p. 168). The term Surf & Turf refers to a dining style in which seafood (Surf) and red meat (Turf) are served on the same plate (Akmeşe & Güder, 2023, p. 64). Surf and turf is a way of serving food that combines terrestrial and seafood, which is particularly popular in the US. Although the dish is often criticized for its high cost, there is a similar practice in Australia known as beef and reef. Surf and turf, which emerged in the 1960s to enrich the menus of coastal restaurants, has become an important trend in the gastronomy world with the creative interpretations of chefs (McMahon, 2023).

In surf and turf menus, the right pairing of seafood and red meat is an important factor determining the overall success of the menu. While lobster is often preferred for its meaty texture and flavor intensity, alternatives such as shrimp and octopus also offer different flavor profiles. The choice of red meat directly affects the price of the menu and the target audience. The preference for tender and flavorful cuts such as tenderloin and pork tenderloin improve the quality of the menu. According to Akdağ and Şahin (2018), the diversity of surf and turf menus is closely related to both the development of culinary techniques and the change in consumer demands.

Green Generation Restaurant

It refers to businesses that are prepared and served with organic products obtained from local producers and have organic certificates in their menus, and that pay attention to energy saving, recycling practices, waste management, adequate use of water resources and reduction of chemical use in their preparation (İpar, Babaç, & Kök, 2020, p. 262). These businesses refer to food and beverage businesses that take care to produce with local techniques while acting with environmental awareness (Kurnaz & Özdoğan, 2017 p. 78).

Green restaurant certification is given to businesses if they fulfill the necessary criteria and are successful in the audits, but they need to make new improvements every year (Yazıcıoğlu & Aydın, 2018). In this way, more importance is given to people and the environment. In order for green generation restaurants to be more successful, the knowledge and awareness of both food and beverage businesses and consumers should improve within the scope of sustainability (Şahingöz & Güleç, 2019, pp. 293-294). It is an important trend for transferring existing products and resources to future generations.

Agro Tourism

The origin of the word agro is “Agri” meaning field in Latin, while the word “agro” in Greek comes from the words meaning field and soil (Buladi Çubukçu, 2023, p. 667). Agro salt is a combination of the words “agriculture and tourism” (Deniz, Özden, Akgün, & Yıldırım, 2018, p. 365). It refers to a type of tourism that combines agricultural activities with tourism experiences (Civelek, Dalgın, & Çeken, 2014, p. 16). Agro tourism is a type of tourism that takes place in places where small farms and agricultural activities take place (Türkben, Gül, & Uzar, 2012). Agro tourism refers to an approach that aims to ensure the continuity of production in agricultural regions and to combine agriculture and tourism by organizing tourism activities in these areas (Ataberk, 2017, p. 156). This type of tourism provides additional income for farms and local producers, diversifying agricultural activities, protecting environmental and cultural values, and is also an important type of tourism for a sustainable future (Adam, 2004).

Living Kitchen

The living cuisine movement is a trend in the tourism sector, especially in large-scale accommodation facilities, which has emerged with the influence of slow food philosophy and themed restaurants. The main motivation for this trend is the search for social and cultural experiences, not just the nutritional needs of tourists. Living kitchens aim to offer different experiences to their guests through the preparation, presentation and consumption of food and beverages (Bölük & Küçükaltan, 2019: 648). In this way, it aims to offer guests a richer and more interactive experience by going beyond the boundaries of the traditional “all-inclusive” system. The philosophy of the trend is to turn consumption into an activity, allowing guests to both enjoy the flavors and socialize (Erdem & Akyürek, 2017: 110; Bölük, 2015).

Cloud Kitchen

Cloud kitchens are referred to as ghost kitchens, dark kitchens or invisible kitchens (Moyeenudin Anandan & Bindu, 2020). According to Bozagcı and Çevik (2022:673), cited in Chi, Leung and Chi (2022), cloud kitchens are defined as food operations that do not have a physical dining area, but only takeaway or grab-and-go operations. The cloud kitchen model aims to provide services without a physical restaurant location, focusing entirely on online orders. By combining multiple businesses under a single roof, this model takes advantage of economies of scale, enabling businesses to use common resources, reducing their costs and increasing their competitiveness. Cloud kitchens can bring together a variety of culinary concepts by hosting many businesses of different scales. In this way, they offer a wide range of menu options for individuals

with different dietary needs such as vegetarian, vegan and gluten-free. Thus, consumers can easily find meals suitable for their special diets (Tariñç & Ülken, 2021:323).

CONCLUSIONS AND RECOMMENDATION

Culinary movements are specific styles and trends that allow cooking and eating habits to change and evolve over time. These trends usually emerge during certain periods and remain popular for a certain period of time. The historical development of culinary trends is shaped by changes in people's eating habits, technological developments and cultural influences.

Culinary movements emerge in response to or in support of developments and other movements. As mentioned in the literature, haute cuisine emerged to provide careful selection of ingredients, cooking techniques, aesthetic presentation and rich flavor. Later on, the nouvelle cuisine movement emerged as a shorter menu and freshness-oriented cuisine in response to classical cuisine. The fast food trend, on the other hand, has led to the emergence of the habit of eating out with technological developments. In response to this trend, the Slow Food movement has emerged. The slow food movement advocates the consumption of products grown in local regions and grown with traditional methods and cooked products without rushing and savoring them. In addition to these movements, the avant-garde cuisine movement has led to the emergence of fusion cuisine and molecular gastronomy. Today, there are many trends depending on the developments. For example, Raw Food, Surf&Turf, Entomophagy (Edible Insects), Green generation restaurants, agro tourism, black food, purple food, etc. have led to the emergence of such movements.

Gastronomy, as a mirror of the social, economic and cultural structures of societies, has been in constant change and transformation throughout history. Gastronomy movements from the past to the present are a living proof of this change. The various movements examined in this study show that gastronomy has become an art, a culture and a way of life beyond just meeting the need for nutrition. Today, gastronomy has entered a new era influenced by factors such as the development of technology, globalization, sustainability and increased health awareness. Trends such as molecular gastronomy, slow food, Surf & Turf, etc. push the boundaries of gastronomy and offer new flavors and experiences. Gastronomy is a dynamic field that is constantly changing and evolving. Following the developments in this field and adapting to new trends is of great importance for gastronomy professionals. The following recommendations can be considered as important steps for the future of gastronomy. Scientific research in the field of gastronomy is important for the discovery of new flavors, the development of healthy eating methods and sustainable food production. Gastronomy should be made sustainable by minimizing environmental impacts.

Emphasis should be placed on issues such as the use of local and seasonal products, reducing waste and saving water. Preserving traditional cuisines and passing them on to future generations is important to sustain the cultural richness of gastronomy. Technology should be used to increase efficiency and innovation in gastronomy. However, care should be taken to use technology as a tool that emphasizes the human touch and flavor.

REFERENCES

- Adam, K., L. (2004). *Entertainment Farming and Agri-Tourism*. ATTRA, National Sustainable Agriculture Information Service, Business Management Guide, Rural Business Cooperative Service, U.S. Department of Agriculture, Fayetteville, California, 1-16.
- Akdag, G. (2016). Different Nations In Turkey From The Sustainable Gastronomy Tourism Perspective. *Mehmet Akif Ersoy University Journal of Institute of Social Sciences*, 164-175.
- Akdağ, G., Özata, E., Sormaz, Ü., & Çetinsöz, B. C. (2016). A New Alternative for Sustainable Gastronomy Tourism: Surf&Turf. *Journal of Tourism and Gastronomy Studies*, 270-281.
- Akdağ, G. & Şahin, E. (2018). Surf and turf. H. F. Nizamloğlu (Ed.), *Gastronomide güncel konular içinde* (327-334. ss.). Konya: Billur Yayınevi.
- Akman, B., Karaaslan, T., Çelebi Öncü, E., & Karaböcüoğlu, M. (2005). *Fun in the Kitchen with Children*. Istanbul: Epsilon Publications.
- Akmeşe, K. A., & Güder, N. (2023). Trends in Gastronomy Tourism: A Research with Secondary Data. *1st International Lake Tourism and Current Trend in Tourism Congress* (pp. 54-69). Konya: Paradigma Academy Publications.
- Akoğlu, A., Çavuş, O., & Bayhan, İ. (2017). The Perception and Attitude of Michelin Star Restaurant Chefs on Molecular Gastronomy: The Perception and Attitude of Michelin Star Restaurant Chefs on Molecular Gastronomy: Evidence from San Sebastian, Spain). *Journal of Tourism and Gastronomy Studies*, 43-59.
- Aksoy, M., & Üner, E. H. (2016). The Birth of Refined Cuisine and the Effects of Innovative Culinary Movements Shaping Refined Cuisine on Food and Beverage Businesses. *Gazi University Journal of Social Sciences*, 1-17.
- Akyürek, M. İ. (2020). Distance Education: A Literature Review. *Journal of Civilization Education Research*, 1-9.
- Alpaslan, K., Tanrıseven, C., & Tütüncü, B. (2018). Can Molecular Gastronomy be Used in Mountaineering Tourism? *Journal of Current Tourism Research*, 104-122.
- Alpaslan, K., Pamukçu, H., & Tanrıseven, C. (2020). Moleküler gastronomi yöresel yemeklerde kullanılabilir mi? *Journal of Tourism and Gastronomy Studies*, 8(1), 231-256.
- Andaç, A. E., & Tuncel, N. Y. (2023). Edible Insects as a Sustainable and New “Food” Alternative. *Çanakkale Onsekiz Mart University Journal of Advanced Research in Natural and Applied Sciences*, 251-267.
- Arslanoğlu, İ. (2000). Culture and Civilization Concepts. *Gazi University Hacı Bektaş Veli Research Journal*, 243-255.
- Ataberk, E. (2017). Possibilities of Integrating Tourism Types in Tire (Izmir): Cultural Tourism, Rural Tourism, Agrotourism and Gastronomy Tourism. *Tourism Academic Journal*, 153-164.
- Aydemir, B., & Özdemir, S. S. (2014). Evaluation of Local Food and Beverage Initiatives in terms of Slow Food Movement: Aydın Yenipazar Case. *Journal of Entrepreneurship and Development*, 323-336.
- Başarangel, İ., & Tokatlı, C. (2018). Slow Food: A Research on the Evaluation of Satisfaction Levels of Visitors of Şile Earth Market. *Journal of Tourism and Gastronomy Studies*, 3-19.
- Baylan, İ., & Badem, A. (2023). Formulation of Some Traditional Products with Purple Flour and Evaluation by Sensory Analysis. *Journal of Culture Research*, 197-207.
- Baysal, A. (2020). *Nutrition*. Ankara: Hatiboğlu Publishing.
- Bozagcı, E. C., & Çevik, A. (2022). Bulut Mutfak Modeli Üzerine Nitel Bir Araştırma: Avane Cloud Kitchens. *Ordu Üniversitesi Sosyal Bilimler Enstitüsü Sosyal Bilimler Araştırmaları Dergisi*, 12(2), 675-688.
- Boz, B. (2022). The Effect of Attachment Types on Fear of Novelty (Neophobia) and Novelty Seeking (Neophilia) Behavior in Gastronomy: Investigation with Traditional Methods and Neuromarketing Tools. Balıkesir: T.C. Balıkesir University.
- Bozok, D., & Yalın, G. (2018). New Trend in Gastronomy: Black Foods. *Journal of Current Tourism Research*, 251-261.
- Böyük, H. (2020). *Sherbet Book: Living Kitchen in the Turkish World*. Antalya: Lycia Book.
- Böyük, H., & Küçükaltan, D. (2019). Living Kitchen Concept and Application Examples in Gastronomy. *4th International Gastronomy Tourism Research Congress* (pp. 647-450). Nevşehir: Nevşehir Hacı Bayram Veli University Faculty of Tourism.

- Buladi Çubukçu, B. (2023). Bibliometric Analysis of Studies on Agro Tourism. *Journal of Humanities and Tourism Research*, 665-675.
- Burke, R., This, H., & Kelly, A. (2016). *Molecular gastronomy*. School of Culinary Arts and Food Technology, 1-9.
- Cankül, D., & Uslu, N. Neurogastronomy and sensory perception. *Journal of Tourism and Management*, 1(1). 2020; 64-74.
- Cetin, G., & Bilgihan, A. (2016). Components of cultural tourists' experiences in destinations. *Current Issues in Tourism*, 137-154.
- Civelek, M., Dalgin, T., & Çeken, H. (2014). Relationship between Agro-Tourism and Rural Development: A Research on Agro-Tourism Areas in Muğla Region. *Tourism Academic Journal*, 15-28.
- Coşar, Y. (2013). *The Effects of Slow City (Cittaslow) Phenomenon on Tourist Behavior and Local People's Perception of Urban Life Quality (Published Master's Thesis)*. Izmir: Dokuz Eylül University.
- Cömert, M., & Güdek, M. (2017). Fifth Taste: Umami (Fifth Taste: Umami). *Journal of Tourism and Gastronomy Studies*, 397-408.
- Çilginoğlu, H., Avcı, M., & Çilginoğlu, Ü. (2022). The Importance of Vertical Farming in terms of Sustainable Gastronomy. *Journal of Humanities and Tourism Research*, 455-467.
- Çoban, Ö., & Harman, S. (2016). A Research on the Visibility of the Slow City Theme on the Websites of the Member Cities of the Slow City (Cittaslow) Turkey Network. *Journal of Faculty of Business Administration*, 235-253.
- Çulha, O. (2020). Experience Economy Applications in Tourism. *Alanya Academic Overview Journal*, 495-519.
- Demirtaş, Ü., & Akkuş, G. (2020). Local Cuisine Activities in Hotel Businesses: Situation Analysis. *International Journal of Global Tourism Research*, 46-63.
- Deniz, S., Özden, O., Akgün, O., & Yıldırım, H. M. (2018). Investigation of Agro Tourism Facilities in Terms of Gastronomy Activities: Çanakkale Sample. *Journal of Tourism and Gastronomy Studies*, 364-378.
- Deveci, B., Türkmen, S., & Avcıkurt, C. (2013). The Relationship Between Rural Tourism and Gastronomy Tourism: Bigadiç Case. *International Journal of Social and Economic Sciences*, 29- 34.
- Dilsiz, B. (2010). Gastronomy and Tourism in Turkey (Istanbul Example). *Istanbul University Department of Tourism Management Master's Thesis*. Retrieved on February 25, 2024 from <http://nek.istanbul.edu.tr:4444/ekos/TEZ/46167.pdf>
- Doğan, E. (2023). *Color Perception of Kitchen Studies in Gastrophysics Perspective: A Qualitative Research (Published Master's Thesis)*. Karaman: T.C. Karamanoğlu Mehmetbey University.
- Dönmez Özel, B. (2021, September). A Research on the Living Culinary Experiences of Tourists Visiting Cappadocia. *Neveşehir Hacı Bektaş Veli University, Institute of Social Sciences, Gastronomy and Culinary Arts Department Master's Thesis*. Retrieved on February 21, 2024 from <https://acikerisim.neveshir.edu.tr/bitstream/handle/20.500.11787/8108/B%c3%9c%cc5%9eRA%20D%c3%96NMEZ.pdf?sequence=1&isAllowed=y>
- Dönmez Özel, B., & Dursun Küçüköğlü, M. (2022). A Research on Living Kitchen Experiences of Tourists Visiting Cappadocia. *Journal of Tourism and Gastronomy Studies*, 2665-2688.
- Durlu-Özkaya, F., Sünnetçioğlu, S., & Can, A. (2013). The Role of Geographical Indication in Sustainable Gastronomy Tourism Mobility. *Journal of Tourism and Gastronomy Studies*, 13-20.
- Ercan, M. O. (2021, August). Evaluation of Turkish Desserts by Chefs within the Scope of Gastronomy Tourism: Product Development Study within the Scope of Fusion Cuisine Practices. *Neveşehir Hacı Bektaş Veli University Gastronomy and Culinary Arts Department Master's Thesis*.
- Erdem, B., & Akyürek, S. (2017). A New Cuisine Trend: Living Cuisines (A New Cuisine Trend: Living Cuisines). *Journal of Tourism and Gastronomy Studies*, 103-126.
- Erdoğan, B., Görtür, A., Peksever, D., Sümer, O., & El, S. N. (2021). Nutritional Characteristics and Consumer Acceptance of Edible Insects as a Sustainable Protein Source. *The Journal of Food*, 1105-1116.
- Eren, E., & Özer, İ. (2018). Dietary Habits in Ancient Anatolian Societies. *Journal of Güncel Turizm Araştırmaları Dergisi*, 2(Ek.1), 308-323. Retrieved from <https://dergipark.org.tr/en/download/article-file/513855> on February 20, 2024

- Eren, S. (2020). Healthy Food Production in Gastronomy and Tourism. *Safran Journal of Culture and Tourism Research*, 228-241.
- Ergün, M. (1994). *Sociology of Education*. Ankara: Ocak Publications.
- Ertürk, M. (2018). Consumers' Reasons for Eating Out. *Gaziantep University Journal of Social Sciences*, 1203-1224.
- Everett, S., & Aitchison, C. (2008). The Role of Food Tourism in Sustaining Regional Identity: A Case Study of Cornwall, South West England. *Journal of Sustainable Tourism*, 150-167.
- Faat, F. & Zainal, A. (2014). Molecular gastronomy movement and application in food. N. Sumarjan, N., Mohd, Z.M.S., & Hanafiah, M. (Ed.). *Hospitality and Tourism: Synergizing Creativity and Innovation in Research* (391394). New York: CRC Press.
- Fraser, S., & Lyon, P. (2018). Chef perceptions of modernist equipment and techniques in the kitchen. *Journal of Culinary Science & Technology*, 16(1), 88-105.
- Gedik, Y. (2020). Sustainability and Sustainable Development with Social, Economic, Environmental Dimensions. *International Journal of Economics, Politics, Humanities & Social Sciences*, 196- 215.
- Gheorghe, G., Tudorache, P., & Nistoreanu, P. (2014). Gastronomic tourism, a new trend for contemporary tourism. *Cactus Tourism Journal*, 12-21.
- Gillespie, C. H. (1994). Gastrosophy and Nouvelle Cuisine: Entrepreneurial Fashion and Fiction. *British Food Journal*, 19-23.
- Gökdeniz, A., Erdem, B., Dinç, Y., & Çelik Uğuz, S. (2015). Gastronomy Tourism: Gastronomy Tourism: An Empirical Study on Domestic Tourists in Ayvalık. *Journal of Tourism and Gastronomy Studies*, 14-29.
- Gökdeniz, A. (2019). Perception of Social Carrying Capacity in Touristic Destinations and Its Effect on Revisit Intention: Ayvalık Research. *MANAS Journal of Social Research*, 8(3). Retrieved on February 21, 2024 from <https://dergipark.org.tr/tr/download/article-file/758438>
- Güven, S. (2022). Çatalhöyük from Past to Present. *Socrates Journal of Interdisciplinary Social Studies*, 18(8), 134-145. Retrieved on February 20, 2024 from <https://socratesjournal.org/index.php/pub/article/view/153/140>
- Ivanovic, S., Mikinac, K., & Perman, L. (2011). Molecular gastronomy in function of scientific implementation in practice. *UTMS Journal of Economics*, 2(2), 139-150.
- İpar, M. S., Babaç, E., & Kök, A. (2020). Evaluation of Customer Comments on Green Generation Restaurants with Content Analysis. *Journal of Gastronomy, Hospitality, and Travel*, 260-269.
- Kahraman, O. C., & Tanrıverdi, H. (2021). The Relationship Between Memorable Tourism Experience and Revisit Intention. *Anatolia: Journal of Tourism Research*, 43-54.
- Karagiannis, D., & Metaxas, T. (2015). Culinary Tourism in Greece: Can the past define the future? A comparative analysis by using 10 case studies. *Munich Personal RePEc Archive*, 1-38.
- Karakan, H. İ. (2021). Gastronomy Themed Recreation Activities. In S. Kül Avan, E. K. Şimşek, Ö. Yayla, & M. C. Birinci, *Recreation and Tourism Research* (pp. 41-52). Istanbul: Çizgi Kitabevi.
- Karaman, E. E., & Soylu, A. G. (2020). A Study to Determine the Perceptions of Gastronomy and Culinary Arts Doctoral Students on Raw Food. *Gastroia: Journal of Gastronomy and Travel Research*, 251-269.
- Kasnak, C., & Palamutoglu, R. (2015). Classification of Natural Antioxidants and Their Effects on Human Health. *Turkish Journal of Agriculture - Food Science and Technology*, 226-234.
- Kaymaz, E., & Ulema, Ş. (2020). A Research on the Use of Edible Insects in Menus the Case of Cappadocia. *Journal of Travel and Tourism Research*, 46-64.
- Kaypak, Ş. (2010). Sustainability of ecological tourism. *Journal of Alanya Faculty of Business*, 93-114. Keskin, E. B. (2020). *Slow City*. Istanbul: Yesterday Today Tomorrow Publications.
- Keskin, E., & Sezen, N. (2022). Relationships Among Gastronomy Festivals, Food Image and Destination Image: Relationships Among Gastronomy Festivals, Food Image and Destination Image a Case Study of Hatay. *Journal of Tourism and Gastronomy Studies*, 856-881.
- Kocadaş, B. (2005). Culture and media. *Bilig*, 1-13.
- Kurgun, O. A. (2017). Edible Insects. In H. Kurgun, *Gastronomy Trends: Millennium and Beyond* (pp.255-266). Ankara: Detay Publishing House.
- Kurnaz, A., Özdoğan O.N. (2017). The evaluation of service quality of the green restaurants in Istanbul using gsrerv model. *Journal of Dokuz Eylul University Faculty of Business Administration*, 10.24889/ifede.286740 1, 75-99.

- Long, L. M. (2004). *Culinary Tourism*. United States of America: The University Press of Kentucky.
- Mckercher, B., Okumus, F., & Okumus, B. (2008). Food Tourism as a Viable Market Segment: It's All How You Cook the Numbers! *Journal of Travel & Tourism Marketing*, 137-148.
- McMahon, M. (2023). What is Surf and Turf? Delighted Cooking: (Online). <https://www.delightedcooking.com/what-is-surf-and-turf.htm> (Erişim Tarihi:05.01.2025).
- Moyeenudin, H. M., Anandan, R., & Bindu, G. (2020). A research on cloud kitchen prerequisites and branding strategies. *International Journal of Innovative Technology and Exploring Engineering*, 9(3), 983-987.
- Oğuz, E. S. (2011). The Concept of Culture in Social Sciences. *Journal of the Faculty of Literature*, 123- 139.
- Okur, B., & Madenci, A. B. (2019). Importance of Germinated Cereals and Legumes in Raw Food Diet. *Journal of Tourism and Gastronomy Studies*, 664-675.
- Otto, J. E., & Ritchie, J. (1996). The service experience in tourism. *Tourism Management*, 165-174.
- Ölmez, M. (2023). *Gastronomy and Culinary Arts Basic Concepts and Current Issues* (Editor: Kadriye Ale Akmeşe). Istanbul: Education Publishing House.
- Özdemir, B. (2020). Healthy Purple Food in Gastronomic Trends. *GSI Journals Serie B: Advancements in Business and Economics*, 16-30.
- Özdemir, G., & Dülger Altner, D. (2019). A Review on the Concept of Gastronomy and Gastronomy Tourism. *Erzincan University Journal of Institute of Social Sciences*, 1-14.
- Özdemir, G., & Dülger Altner, D. (2019). A Review on Gastronomy Concepts and Gastronomy Tourism. *Journal of Midwifery and Health Sciences*, 1-14.
- Özel, B. D. (2022). *A Research on the Living Culinary Experiences of Tourists Visiting Cappadocia*. Nevşehir: T.C. Nevşehir Hacı Bektaş Veli University Institute of Social Sciences Gastronomy and Culinary Arts Department (Master's Thesis).
- Özgören Çapraz, E. (2023). Dark Colored Foods: Black Foods. In S. Türk Aslan, *Gastronomic Movements II* (pp. 143-162). Ankara: Iksad Publishing House.
- Özgürel, G., & Avcıkurt, C. (2018). Perception of Slow Food Movement by Local Tourists (Academicians). *Journal of Tourism and Gastronomy Studies*, 568-587.
- Özmen, Ş. Y., Birsen, H., & Birsen, Ö. (2016). "Slow Movement" Rebellion Against Globalization in All Areas of Life from Environment to Culture. *Inonu University Faculty of Communication Electronic Journal*, 38-49.
- Robinson, P., Lück, M., & Smith, S. L. (2020). *Tourism 2nd Edition*. London UK: CABI.
- Sarı, D., Dokuz Murat, B., Murat, E., & Samancı, M. (2024). Nörogastronomi Kavramı ve Uygulamalarının Bibliyometrik Analiz Yöntemi İle İncelenmesi . *Journal of Recreation and Tourism Research*, 11(3), 66-84.
- Sarıışık, M., & Özbay, G. (2014). A Literature Review on Gastronomy Tourism. *Anatolia: Journal of Tourism Research*, 264 - 278.
- Sarioğlan, M. (2014). Fusion Cuisine Education and Its Relation with Molecular Gastronomy Education (Comparative Course Content Analysis). *International Journal on New Trends in Education and Their Implications*, 5(3), 64-70.
- Sevinç, F., & Çakmak, T. F. (2017). Raw Nutrition and Living Foods in Consumption Culture. *IWACT 2017 International West Asia Congress of Tourism Research* (pp. 147-155). Van: Paradigma Academy Press and Publication Distribution.
- Sormaz, Ü., & Dursun, K. (2023). Study of fusion implementation in the menus of restaurants serving in Antalya with Porter's five forces model. *CABI Digital Library*, 175-197.
- Sormaz, Ü., Özata, E., & Güneş, E. (2015). Gastronomy in Tourism. *Journal of Social Sciences*, 67-73.
- Şahingöz, S. A., & Güleç, E. (2019). Green generation restaurant movement in restaurant kitchens: The case of "La Mancha Restaurant". *Journal of Tourism Theory and Research*, 292-300.
- Şahin, E. Ö. (2020). A Current Approach to Gastronomy-Neurogastronomy: A Review of the Articles Published in Science Direct Database. *Journal of Tourism & Gastronomy Studies*, 8(Special Issue 4), 168-178.

- Şengül, A. ve Adabalı, M. M. (20 23). The Relationship Between Neurogastronomy, Senses and Taste, Sosyal, Beşeri ve İdari Bilimler Dergisi, 6(7): 934-951.
- Şensoy, F., & Tiritioğlu, S. (2018). Archaeology of Nutrition: Traces of the Past in Today's Ankara Food .
Journal of Güncel Turizm Araştırmaları Dergisi, 2(Ek.1), 209-233. Retrieved from <https://dergipark.org.tr/tr/download/article-file/513840> on February 20, 2024.
- Tarıncı, A., & Ülken, H. (2021). Kitchen trend after covid-19: cloud kitchen. Journal of Gastronomy, Hospitality and Travel, 4(2), 321-328
- Trihas, N., Kyriakaki, A., & Zagkotsi, S. (2015, October). Local cuisine and agricultural products as a means of enhancing tourists' gastronomic experiences in Greece. In *IMIC2015: 1st International Conference on Experiential Tourism* (pp. 09-11).
- Tuğan, U. S. (2021). The Use and Comparative Analysis of Gastronomic Elements in Touristic Promotional Films Used in the Promotion of Turkey and Spain. *Başkent University Gastronomy and Culinary Arts Master's Program with Thesis*. Retrieved on February 25, 2024 from <http://dspace.baskent.edu.tr/bitstream/handle/11727/6898/10405240.pdf?sequence=1&isAllowed>
- Tung, V. W., & Ritchie, J. (2011). Exploring the essence of memorable tourism experiences. *Annals of Tourism Research*, 1367-1386.
- Turan, H., Güliz, B., Ayduğ, İ., Bayesen, D., & Sünnetçioğlu, S. (2020). Kitchen Chefs' Opinions on Fusion Cuisine and Suggestions for Fusion Cuisine with Local Foods of Çanakkale Province. *Ankara Hacı Bayram Veli University Tourism Faculty Journal*, 332-358.
- Türkben, C., Gül, F., & Uzar, Y. (2012). The Place and Importance of Viticulture in Agro-Tourism in Turkey. *KMÜ Journal of Social and Economic Research*, 47-50.
- Uyanık, N., & Berk, F. M. (2016). Çatalhöyük in the context of space - city and civilization. *International Journal of Tourism and Social Research* (16), 1-16. Retrieved on February 20, 2024 from <https://dergipark.org.tr/en/download/article-file/1673293>
- Ünal, M., & Zavalısız, Y. (2016). An Anti-Globalization Movement: The Slow Movement. *Journal of Human and Social Sciences Research*, 889-912.
- Üner, E. H. (2023). Renaissance in the Kitchen: The Early Modern European Culinary Culture. *Journal of Tourism and Gastronomy Studies*, 1230-1242.
- Wang, N. (1999). Rethinking Authenticity in Tourism Experience. *Annals of Tourism Research*, 349-370.
- Yavuz, V. A. (2010). Sustainability Concept and Sustainable Production Strategies for Businesses. *Mustafa Kemal University Journal of Institute of Social Sciences*, 63-86.
- Yazıcıoğlu, İ., & Aydın, A. (2018). A Qualitative Research on Green Restaurant Practices: The Case of Istanbul. *Gazi University Tourism Faculty Journal*, 55-79.
- Yıldırım Saçılık, M. (2020). The Applicability of Innovative Culinary Trends within the Scope of Turkish Cuisine and Determination of Opinions on the Use of Local Cuisine in Menus. *Journal of Tourism and Management*, 1(1), 21-39. Retrieved from <https://doi.org/10.29329/jtm.2020.289.2> on February 21, 2024
- Yıldız, M., & Yılmaz, M. (2020). A Look at Trends in the Field of Gastronomy. *Sivas Interdisciplinary Journal of Tourism Research* (5), 19-35. Retrieved on February 25, 2024 from http://sita.cumhuriyet.edu.tr/pub/issue/57733/781834#article_cite
- Yılmaz, H., & Erden, G. (2017). A Research on Investigating the Effects of Colors on Soups' Taste Perception. *Journal of Tourism and Gastronomy Studies*, 265-275.
- Yurtseven, H. R., Kaya, O., & Harman, S. (2010). *The Slow Movement*. Ankara: Detay Publishing.
- Yüncü, H. R. (2015). Gastronomy Tourism and Perşembe Plateau in terms of Sustainable Tourism. *10th Aybastı-Kabataş Kurultayı*, 27-34
- Van der Linden, E., McClements, D.J., & Ubbink, J. (2008). Molecular gastronomy: a food fad or an interface for science-based cooking? *Food Biophysics*, 3, 246-254.
- Zurnacı, N. (2012). Entrepreneurship and Organization in Rural Tourism. *KMÜ Social and Economic Research Journal*, 65-70.

INNOVATION IN KITCHENS: EVALUATION OF ARTIFICIAL INTELLIGENCE APPLICATIONS

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INTRODUCTION

Gastronomy is the art of preparing and consuming food and beverages, which has been at the centre of human culture and social life for centuries. Today, this field is undergoing a major transformation with the impact of technological innovations. In particular, artificial intelligence has revolutionised the world of gastronomy, bringing radical changes in many areas such as food preparation, nutrition planning and customer experience. By using technology, artificial intelligence increases efficiency, reduces waste and offers personalised services in the food and beverage industry. In this study, the contributions of these technologies to the sector and the new possibilities they have created are presented in detail in a wide spectrum ranging from nutritional evaluation and calorie calculation to data analytics and AI-supported personalised nutrition recommendations. It also analyses in detail the development of artificial intelligence from the first time it was used in the kitchen to the point where it is now combined with technologies such as metaverse and augmented reality. In addition to these, the research also examines the advantages of artificial intelligence in areas such as nutritional evaluation, calorie calculation, data analytics and personalised nutrition, as well as the transformation brought by artificial intelligence to production processes through kitchen automation and robotics and its effects on supply chain management. Demonstrating the synergy between gastronomy and artificial intelligence is a good potential for these technologies to create a healthier, sustainable and efficient food system in the future. This comprehensive review is an important resource for those working in the fields of gastronomy, computer science and nutrition, industry professionals and all researchers interested in the subject. The literature on the use of innovative technology in the industry is limited. Some of the studies indicate that there is hesitation in the use of robotic devices in food and beverage businesses (Keskin & Sezen, 2021). Yu (2020) found that robots exhibiting animation shows generally create a positive perception in people. However, when it comes to the use of humanoid robots, he concluded that people have a negative attitude. However, in the study conducted by Jang and Lee (2020),

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it was stated that customers' attitudes towards service robots were positive. These findings show that the anthropomorphic characteristics of robots play an important role in human-robot interaction and that this interaction may have different results depending on the context. Bollini et al. (2013) concluded in an experimental study that problems may be encountered in the construction of large robotic systems and that the interaction of many systems and subsystems is required to fulfil complex tasks such as cooking. On the other hand, researchers from many countries are conducting studies to achieve new tastes and experiences by combining digital technologies and gastronomy (Chisik, Pons, & Jaen, 2018; Çerkez & Kızıldemir, 2020; Hwang, Lee, & Suh, 2011; Mu et al., 2019; Sugiura et al., 2010; Uçuk, 2022:233; Uzan & Sevimli, 2020; Zoran, Gonzalez, & Mizrahi, 2021). The aim of this study is to evaluate the applications of artificial intelligence technologies in the field of gastronomy. The study examines in depth the evolution and current applications of artificial intelligence technologies in the gastronomy sector.

History And Development Of Artificial Intelligence In Gastronomy

The term artificial intelligence was first used by John McCarthy in 1956 and artificial intelligence was defined as the science and engineering of producing intelligent machines. Artificial intelligence is a research field that aims to analyse and formulate mental functions related to intelligence in humans with the help of computer models and apply them to artificial systems (Choudhary et al., 2016: 3292; Uzan & Sevimli, 2020: 47; Yağcı et al., 2005: 5).

The intersection of gastronomy and artificial intelligence dates back to the integration of technology and food preparation processes. The idea of using artificial intelligence applications in the field of gastronomy started to gain more attention towards the end of the 20th century with the developments in computer science and data analytics. Initially, simple algorithms and software were used in restaurant management systems to optimise customer orders and inventory management. These early applications were mostly aimed at improving business processes and increasing efficiency (Uzan, Sevimli, 2020).

By the early 21st century, artificial intelligence technologies started to be equipped with more sophisticated tools such as big data analytics and machine learning. Especially since the 2010s, the use of these technologies in the field of gastronomy has spread rapidly. AI-supported recipe recommendation systems and diet planning applications have started to provide personalised recommendations based on personal tastes and health data. These developments were a great revolution for both individuals who like to cook at home and professional chefs (Kuday, 2021). In recent years, the proliferation of research on food and gastronomy has increased interest in the use of artificial intelligence and robots. Another important milestone in the use of artificial intelligence in

gastronomy has been the development of kitchen robots and automatic cooking systems. Especially large restaurant chains and food production facilities have adopted these technologies to increase efficiency and ensure consistency (Uzan, Sevimli, 2020). Robot chefs have attracted attention with their ability to perfectly execute recipes. In this period, studies have also started to be carried out on the potential of artificial intelligence to create new recipes by analysing sensory data (taste, smell, texture). Today, the integration of robotic technologies in the food sector enables the emergence of new applications that promote healthy eating. Robochef, developed by Moley Robotics, is an example of groundbreaking work in this field (Aydın and Uçkan Çakır, 2022: 2148; Moley, 2022). From hamburger-cooking robot chefs such as Flippy at CaliBurger to Pizza Hut's order-taking Pepper, robotic technologies are spreading rapidly in restaurants. This automation is used not only in food preparation and service, but also in various fields such as robots such as Pazzi preparing pizza (Uzan & Sevimli, 2020), robot waiters in Japanese samurai costumes (Pieska et al., 2013), and even robots used as cleaning staff (Hazarhun & Yılmaz, 2020). Researchers such as Otero (2018) and Fuste-Forne (2021) state that Flippy has broken new ground in the food industry, while Yılmaz (2018) emphasises Pepper's role in customer service. These developments show that robotic technologies are becoming increasingly important in the restaurant industry. Today, artificial intelligence is used in a wide range of areas in the field of gastronomy, from menu planning to customer service, from supply chain management to sustainable food production (Kuday, 2021). Artificial intelligence algorithms offer restaurants the opportunity to predict which dishes will be more popular on the menu by analysing consumer preferences. At the same time, thanks to kitchen automation, food waste is reduced and kitchen processes are becoming more sustainable. These developments reveal the critical role that artificial intelligence will play in the future of gastronomy.

Usage Areas of Artificial Intelligence in Gastronomy

Cooking is a process of innovation that has been going on since the first humans started making tools. While tools have made life easier, cooking has evolved in a way that makes nutrition enjoyable and meaningful. In this process, food has become not only a necessity but also a cultural and artistic expression (Bregazzi, 2014; Uçuk, 2022:232). Artificial intelligence technologies offer revolutionary innovations in menu planning and recipe suggestions in the field of gastronomy. With traditional methods, the menu creation process was usually based on the experience and intuition of chefs. However, artificial intelligence provides significant advantages to restaurant businesses and individual users by making this process more scientific and data-driven (Uzan, Sevimli, 2020). AI-supported menu planning systems analyse customer preferences, nutritional values and seasonal ingredients using big data analytics and machine learning

techniques (Aydın & Uçkan Çakır, 2022). By analysing past sales data, these systems determine which dishes are popular, which ingredients are frequently used and which combinations are more preferred by customers. Thus, restaurants can increase customer satisfaction and reduce waste by optimising their menus. In addition, artificial intelligence algorithms can provide diversity and innovation in menus, so that customers can always be offered fresh and interesting options. For individual users, AI-supported recipe recommendation systems offer special recipes in line with personal tastes and eating habits. Taking into account information such as users' dietary preferences, allergies and favourite ingredients, AI can develop personalised recipe suggestions. For example, if a user prefers a vegan diet, the system suggests suitable vegan recipes. At the same time, these systems can help users reduce food waste by offering recipes according to the ingredients in the refrigerator (Aydın and Uçkan Çakır, 2022). Artificial intelligence also makes important contributions in the field of health and nutrition by analysing nutritional values and calorie information. In particular, dietitians and nutritionists can prepare more effective and personalised nutrition plans with AI-supported tools. This makes it easier for individuals to achieve their health goals and lead a balanced life (Öztürk, 2020). In summary, artificial intelligence technologies bring great innovations in the field of gastronomy in menu planning and recipe recommendations. The advantages it provides for both restaurants and individual users are highly valuable in terms of increasing customer satisfaction, reducing food waste and promoting healthy eating. These technologies can play an important role in the future of gastronomy and can radically change food preparation and consumption habits

Gastronomy 4.0

Food is not only one of the most important elements of a nation's identity and culture, it is also closely related to the symbols, history, discourses and mythology of that nation. Research shows that there are strong historical links between food and tourism. Moreover, throughout history, food and agriculture have been important economic sectors in the formulation of public policies and strategies of societies. Countries' agricultural systems, food products and the outputs of these products have been among the most critical inputs of the tourism sector (Yıldız; 2011) and sometimes these elements have played very important roles in the symbols and rituals of countries. The concept of food is one of the main elements of the tourism sector and plays an important role in the accommodation process. Gastronomy is a concept that includes the socio-cultural characteristics of food and meals. Today, with the acceleration of globalisation, the world has become a market offering the same or similar products (Toksöz & Aras, 2016).

Gastronomy enables the development of different types of tourism. In addition, gastronomy plays an important role in preserving and transferring historical and cultural heritage to future generations (Hall & Sharples, 2003). In the food sector, as in other areas, technology and applications are of great importance. Technology has a cost, but it also has the potential to increase revenue and profit. Before adopting a particular technological system, a restaurateur should evaluate the potential benefits for customers and the restaurant and compare these benefits with the cost of the system (Kimes, 2008). Davutoğlu and Yıldız (2020: 306) define Gastronomy 4.0 as the process of making food systems more efficient, sustainable and personalised by integrating technologies such as 3D printing, big data analytics, automation and cyber security. Gastronomy 4.0, which emerged by integrating Industry 4.0 applications into the food and beverage sector, has the potential to increase customer satisfaction by enriching the dining experience. Interactive technologies used especially at dining tables provide a competitive advantage by offering consumers a fun and unforgettable experience. Various studies in the literature show that such applications play an important role in increasing the revenues of businesses. However, the success of these applications depends on various factors such as the financial structure of the business, the type of services offered and the characteristics of its physical environment (Keskin & Sezen, 2021:184; Kimes, 2008; Spence & Piqueras-Fiszman, 2013). Nowadays, people want to have good experiences while meeting their eating needs. The use of technology in this field contributes to improving these experiences. In their study, Spence and Piqueras-Fiszman (2013) predicted that digital technologies will become increasingly common in the dining tables of the future. In the same study, it was stated that technological applications are used for various purposes in the food sector. These purposes may include increasing the flavour of food, making the dining experience more fun and attractive, or making food healthier.

3D Printers and Gastronomy

The food technologies developed by NASA within the scope of space research constitute the basis of digitalisation in the field of gastronomy today. As Bregazzi (2014) states, innovations such as 3D food printer technology are considered as an extension of the food storage, cooking and preparation techniques developed by NASA in accordance with the harsh space environment conditions (Uçuk, 2022: 233).

Advances in three-dimensional printer technology have led to the emergence of new applications in the food and gastronomy sector. With this printer technology, production has become easier and uniform. In addition to its quality, it is an important technology in terms of people's health. While the European Union attaches importance to the innovations of 3D technology in the field of

health, it states that people with nutritional problems will increase the quality of life. With this development, patients who cannot get the foods they want will be able to eat the foods they like and enjoy thanks to 3D printers (Jia, 2016; Sun et al., 2015). With the 3D printer, which is a new technology, various products such as meat and dessert ingredients can be made as well as foods such as pizza and pasta, which are simple dough products in the first stage (Izdebska & Zolek-Trynowska, 2016; Sun et al., 2015; Sol et al., 2015). Printers have started to be used in businesses with Food Ink, which is the world's first 3D restaurant (Aydın, Ş., & Uçkan Çakır, 2022). With the development of technology, 3D foods will change rapidly and become more easily accessible and sustainable in the future.

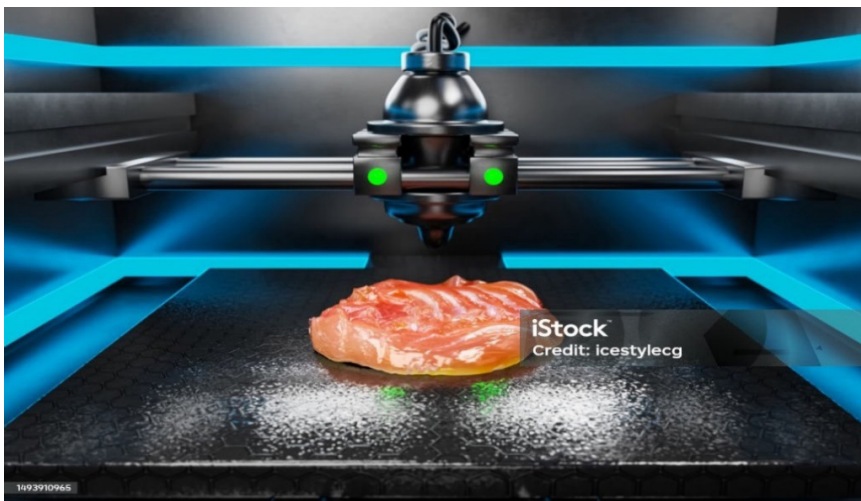


Image 1: 3d Rendering illustration of a cutting-edge food production method: 3D-printed fish flesh that's all set to be cooked (<https://www.shutterstock.com/>).

Metaverse and Gastronomy

It is known that food and beverage businesses pay attention to the use of the metaverse and work to integrate the metaverse into restaurants. Metaverse refers to a vast virtual universe where virtual and real worlds merge, where users can interact and have digital experiences (icestylecg). Thanks to the virtual universe created by the metaverse, people will be able to visit the restaurant using this technology from wherever they are, determine the table they want to sit, choose the product they want and order it as in real life. They will taste and experience virtual products and pay a fee at the end of this service. This extraordinary metaverse application makes it easier for people to visit various restaurants and discover new flavours from home (www.ktchnrebel.com). Supreet Raju, the founder of OneRare company, established the Foodverse, which is recorded as a first in the world, and described the site as “a food universe that evolves day by day”. The Foodverse, which was created virtually, may play an active role

in our lives in the future in terms of finding alternative solutions to the climate crisis and carrying out studies on the food problem. Foodverse is a platform that combines the passion for food with the digital world, aims to offer unforgettable virtual experiences to its users, and aims to create a communication network with other people in the sector (Buckler, 2022).

Augmented Reality / Virtual Reality Devices

Augmented reality (AR) technology, which has become increasingly important in the tourism sector in recent years, has led brands and companies to make significant investments. This technology has ushered in a new era in tourism marketing and enriching experiences (Aslantürk & Erdem, 2021; Knani et al., 2022). The integration of augmented reality applications in the field of gastronomy draws attention with its potential to offer unique and unforgettable experiences to consumers (Aydın & Uçkan Çakır, 2022: 2147). In a study conducted by Aksoy and Akbulut (2016), it is stated that smart tables equipped with augmented reality technology in Inamo Restaurant in London offer customers an interactive dining experience. Thanks to this system, customers have the opportunity to follow the preparation stages of the dishes they order in real time, thus experiencing a multi-sensory entertainment experience that goes beyond the traditional restaurant experience. Korsgaard et al. (2017) combined real food with virtual interactions using AR. These and similar studies show that AR enriches the eating and drinking experience and transforms individuals' relationships with food. AR applications have become a valuable tool in the gastronomy sector with the potential to create unforgettable experiences. Similarly, in another study, Perez and colleagues (2019) developed an AR application that allows participants to have a unique experience by eating real food on a virtual beach. In this study, menus designed by professional chefs were combined with distributed reality, allowing participants to better understand local flavours.

Augmented reality (AR) is an interactive experience resulting from the combination of computer-generated sound, image and other digital data with the real world. In this way, users can see and interact with virtual objects in their physical environment in real time. AR, which has been actively used in many sectors from museums to hotels, aims to offer unforgettable experiences in the tourism sector (Wei, 2019). The new AR technology can transform favourite accommodation establishments into a 3D virtual environment through an application installed on a mobile phone (Wei, 2019). With the help of the application, users can virtually visit the destination areas. This improves the customer experience by giving guests the opportunity to fully experience a property, room or destination beyond the opportunity to “take a look before booking” (Lukanova & Ilieva, 2019). The technology called virtual reality

provides benefits to users in tourism trips (Samala et al., 2022). Today, hotels using virtual reality technology can show their guests every part of the hotel in a realistic way before they arrive at the hotel (Lukanova & Ilieva, 2019). In addition, guests have the opportunity to follow the instant changes in the hotel they experience 360 degrees (Huang et al., 2021).

Digital Table

The digitalisation of gastronomy is the merger of technology, which has progressed rapidly in recent years, with food (Zoran, Gonzalez, & Mizrahi, 2021). According to Bregazzi (2014), digital gastronomy means the systematic integration of digital technologies in food production processes and the use of data analytics for the discovery of new flavours. Interaktive Restaurant Technology, a smart table manufacturer with technological features compared to traditional tables, brings innovation to the restaurant experience and makes dining a technological event. These tables, which are slowly being used, offer features such as ordering without an intermediary and instantly monitoring the preparation of the food. Inamo restaurant, which received the award for the best use of technology in 2019, draws attention with this service it provides to guests. (www.inamorerestaurants.london). Scientists from the National University of Singapore and a researcher named Nimesha Ranasinghe developed a cocktail controlled by sound and senses with the 'voctail' system. This cocktail, which is reflected to people in terms of taste, visual and smell, gives a feeling close to reality. This process takes place thanks to a kind of odour, light and different electrons injected into the glass. Tasting is realised thanks to the current transmitted by the electrons to the papillae on the sides of the tongue. Taste sensation is realised by sending the reactions received from here to the command part of the brain. Thanks to this system, people have the opportunity to create different and personal flavours and share them on internet networks (Fourtané, 2018).

Nutritional Assessment and Calorie Calculation

Artificial intelligence offers important innovations in nutritional evaluation and calorie calculation, helping individuals and professionals to eat more consciously and healthily. Determining nutritional values and calorie amounts with traditional methods was a time-consuming and complex process. However, artificial intelligence-supported systems accelerate this process and increase its accuracy. These systems can automatically analyse the nutritional values and calorie contents of foods using big data analytics and machine learning algorithms (Aydın and Uçkan Çakır, 2022). For example, when a recipe or menu input is provided, artificial intelligence can quickly calculate the nutritional values and calorie amounts of the ingredients in this dish. This is a great advantage for dietitians and nutritionists so that they can make recommendations based

on accurate and comprehensive nutritional information. These technologies are integrated with mobile applications and wearable devices, making it easier for individuals to monitor their daily calorie intake and food consumption. By taking photos of the food they eat or scanning barcodes, users can instantly access nutritional values and calorie information. These systems help users achieve their healthy eating goals by monitoring their eating habits. For example, an individual who wants to lose weight can reach their goals faster and more effectively by monitoring their daily calorie intake and following the recommendations of artificial intelligence (Öztürk, 2020). Artificial intelligence also makes significant contributions to the gastronomy industry in improving and personalising the customer experience. Restaurants, hotels and other food service businesses can offer more personalised and memorable experiences to their customers thanks to artificial intelligence-supported systems. These systems analyse customer data and make recommendations based on individual preferences, dietary requirements and previous orders. For example, if a customer prefers a certain type of food frequently, AI can use this information to suggest new similar dishes or offer special menu offers. Such personalisation can increase customer satisfaction and encourage loyalty. In addition, artificial intelligence chatbots and virtual assistants can be used in customer service to provide fast and accurate answers to customers' questions. This eases the burden of customer service representatives and enables 24/7 service to customers. For example, when a customer wants to get information about a restaurant's menu, opening hours or reservation status, an AI-powered chatbot can respond instantly. While such services improve the customer experience, they also increase the operational efficiency of businesses (Öztürk, 2020). Kitchen automation and robot chefs are one of the most innovative and remarkable applications of artificial intelligence in the field of gastronomy. These technologies make food preparation processes more efficient, consistent and hygienic. Robot chefs are characterised by their ability to perfectly execute complex recipes. These robots are able to cut and chop ingredients, cook and serve food according to pre-programmed recipes. Thus, the risk of human error is reduced and the quality of meals is standardised (Kiraz, 2020). According to Keskin and Sezen (2021), in 2015, robots named Koya and Kona, which were produced in Japan, were assigned to a ramen restaurant in Shanghai, China, marking an important first in the food service sector. These robots perform noodle boiling and correct portioning, which are critical stages of the ramen preparation process, with high precision and speed (Sezen 2021).

Kitchen automation is widely used to improve efficiency in large restaurant chains and food production facilities. Quick service restaurants use automated machines to prepare burgers, pizzas or sandwiches, ensuring that orders are

prepared quickly and consistently. By accurately processing orders, these systems increase customer satisfaction and reduce labour costs. Artificial intelligence-supported devices are also becoming widespread in home kitchens. Smart kitchen appliances guide users by following recipes step by step and automate the cooking process (Kiraz, 2020). For example, smart pots or ovens can automatically adjust the time and temperature required when cooking a particular dish. Such devices make cooking easier and ensure that the results are perfect every time. Artificial intelligence also provides great benefits to the gastronomy sector in supply chain and logistics management. Supply chain management is critical to optimising the journey of food ingredients from field to plate. Artificial intelligence offers various solutions to make this process more efficient, fast and sustainable (Aydın & Uçkan Çakır, 2022: 187). Firstly, artificial intelligence-supported systems provide great advantages in demand forecasting and inventory management. These systems can predict future demand by analysing past sales data, seasonal trends and other factors. Thus, businesses can optimise the supply chain by avoiding unnecessary inventory holding costs (Aydın and Uçkan Çakır, 2022). For example, a restaurant chain can determine which materials should be ordered and when based on artificial intelligence predictions and can manage inventory more effectively. Artificial intelligence also improves logistics processes. By optimising transport routes, it shortens delivery times and reduces transport costs. This is particularly important in the transport of fresh food, as timely delivery of food is critical to maintaining its freshness and quality. Artificial intelligence algorithms determine the most suitable transport routes by analysing traffic data, weather forecasts and other logistics data (Kiraz, 2020). Food safety and traceability are also improving thanks to artificial intelligence. Monitoring and recording every step in the supply chain is important to ensure the safety and quality of food. Artificial intelligence monitors the process from the source of food to the final consumer, identifies potential problems and ensures that preventive measures are taken. This is a great advantage, especially in terms of preventing foodborne diseases and increasing consumer confidence (Calayır, Yazıcı, 2018). These technologies increase the operational performance and customer satisfaction of businesses by ensuring effective management of food materials.

Data Analytics and Artificial Intelligence Assisted Nutrition

Data analytics and artificial intelligence technologies improve the health and quality of life of individuals by providing personalised and effective solutions in the field of nutrition. While traditional nutritional advice is often based on standards for the general population, artificial intelligence and data analytics can be used to create personalised nutrition plans tailored to each individual's unique needs and preferences. This has become possible with the application of big data analytics and machine learning techniques to nutrition

sciences (Gençoğlu, Asan, 2023). Artificial intelligence-supported nutrition systems analyse individuals' health data, genetic information, lifestyles and dietary habits and provide them with special nutritional recommendations. For example, by analysing an individual's health history and genetic structure, certain health risks such as diabetes or heart disease can be identified and preventive nutrition strategies can be developed for these risks (Gençoğlu, Asan, 2023). Likewise, balanced nutrition plans can be created in accordance with a person's energy needs and nutritional requirements, taking into account their daily activities, sports habits and dietary preferences. Data analytics plays a critical role in transforming large amounts of nutrition data into meaningful information. Modern food monitoring applications and wearable health devices record individuals' daily food consumption and physical activity. This data is analysed by artificial intelligence algorithms to provide in-depth insights into individuals' dietary habits. For example, if it is detected that a user consumes too much sugar in a certain period, artificial intelligence warns this situation and suggests healthier alternatives. This helps individuals to develop and maintain healthy eating habits (Atasoy, et al., 2024). For example, a dietitian can use AI-powered tools to optimise the amount of calories and nutrient distribution needed for a patient to achieve their weight loss goals. Such personalised approaches may have higher success rates than traditional diet plans. The food industry also benefits greatly from AI and data analytics. By analysing consumer preferences and dietary trends, food manufacturers can develop healthier and innovative products. For example, consumer data can be used to produce low-calorie foods or foods suitable for special diets. In addition, artificial intelligence optimises the nutritional values of products, providing consumers with more nutritious and healthy options (Gençoğlu, Asan, 2023). Data analytics and AI-supported nutrition offer powerful tools to improve the overall health of individuals and society. These technologies provide more effective and sustainable solutions by personalising dietary habits. They help individuals achieve their healthy living goals and enable the food industry to better respond to consumer needs. Artificial intelligence and data analytics have the potential to revolutionise nutrition sciences and create a healthier and more conscious society in the future (Atasoy, et al., 2024).

CONCLUSIONS AND RECOMMENDATIONS

The study comprehensively examined the usage areas of artificial intelligence in the field of gastronomy and the innovations brought by this technology to the sector. The development process from the first applications of artificial intelligence in gastronomy to the point reached today clearly shows how technology has revolutionised this field. Artificial intelligence is used in a wide range of areas such as menu planning, recipe suggestions, nutritional

assessment and calorie calculation, data analytics-supported nutrition, customer experience and personalisation, kitchen automation and robot chefs, supply chain and logistics management. Artificial intelligence in nutritional assessment and calorie calculation enables individuals and professionals to quickly and accurately analyse nutritional values. Thus, it makes it easier for individuals to achieve their health goals and provides a powerful tool for dietitians and nutritionists. Data analytics and AI-powered nutrition offer personalised solutions, creating nutrition plans tailored to each individual's unique needs and preferences. This helps to develop and maintain healthier eating habits. Kitchen automation and robot chefs offer a significant innovation in the gastronomy sector by making food preparation processes more efficient, consistent and hygienic. These technologies increase the operational efficiency of restaurants, while at the same time providing better quality service to customers. In the field of supply chain and logistics management, artificial intelligence helps to optimise demand forecasting, inventory management and logistics processes. This reduces food waste and makes the supply chain more sustainable and efficient. Artificial intelligence and data analytics technologies offer great innovations and developments in the field of gastronomy. These technologies increase efficiency, reduce waste and provide more personalised and quality services to customers in the food and beverage industry. In the future, it is expected that the impact of AI in the field of gastronomy will further increase and these technologies will be used more widely. These developments at the intersection of gastronomy and artificial intelligence have the potential to create a healthier, sustainable and innovative food and beverage sector. It is recommended that studies on robotic applications in kitchens and literature should be increased and continued.

REFERENCES

- A. PEKYAMAN, S. Ö. (2023, Ağustos 28). METAVERSE DENEYİMİ: GASTRONOMİ KAPSAMINDA SANAL ORTAMLARDA BULUNUŞLUK HİSSİNİN ÖLÇÜLMESİ. *SOCIAL SCIENCE DEVELOPMENT JOURNAL*.
- AKGÜN, A. (2023). Otel Faaliyetleri İçin Yapay Zekâ Destekli Uygulamalar. *Selçuk Turizm ve Bilişim Araştırmaları Dergisi*, Sayı: 3, 1-21.
- Aslantürk, E. v. (2021). Teknoloji Kullanımına Yönelik Tutumun Otellerde Robot Kabul Edilebilirliği Üzerine Etkisi. *Journal of Global Tourism and Technology Research*, s. 102-115.
- Atasoy, Z. B. (2023). Yapay Zeka Ve Beslenme. D. Ö. Göç içinde, *Sağlık & Bilim 2023: YAPAY ZEKA VE BESLENME*. Aydın: Efe akademi yayınları.
- Aydın, Ş. &. (2022, Aralık 30). Gastronomi Ve Dijitalleşme. *Nevşehir Hacı Bektaş Veli Üniversitesi SBE Dergisi 2143-2159.*, s. 4-12.
- Aydın, Ş. &. (2022, Aralık 30). GASTRONOMİ VE DİJİTALLEŞME. *Nevşehir Hacı Bektaş Veli Üniversitesi SBE Dergisi 12(4)*, 2143-2159.
- BAŞ, P. D. (2022, Aralık 1). *Dijital Gastronominin Gelişim Süreci*. İstanbul: Efe Yayın Akademi.
- Bollini, M. T. (2013, ocak). Interpreting and executing recipes with a cooking robot. . In *Experimental Robotics: The 13th International Symposium on Experimental (Springer International Publishing.)*, s. 481-495.
- Bregazzi, A. (2013). Digital Gastronomy. In Proceedings of the Food & Material Culture. *Proceedings of the Oxford Symposium on Food and Cookery Oxford Symposium*.
- Buckler, N. (2022, 03 25). Foodverse: World's First Food Metaverse Where NFTs Can buy Food IRL. : <https://beincrypto.com/foodverse-worlds-first-food-metaverse-where-nfts-can-buy-food-irl/> adresinden alındı
- CALAYIR, A. K. (Aralık 2021). YAPAY ZEKÂ DESTEĞİ İLE MİKRO SİGORTALAMA SİSTEMİ İÇİN BLOK ZİNCİRİ UYGULAMASI. *İstanbul Üniversitesi Akademik Veri Yönetim Sistemi*, 20-65.
- Chisik, Y. P. (2018). Gastronomy meets ludology: towards a definition of what it means to play with your (digital) food. In *Proceedings of the 2018 Annual Symposium on Computer-Human Interaction* , (s. 155-168). Boston.
- Choudhary, S. A. (2016). An Innovative Study on Artificial Intelligence and Robotics. . *International Journal of Innovative Research in Computer and Communication Engineering 3292-3296.*, s. 3-4.
- Critic, C. (2020, Şubat). *Celebrity Cruises to Replace Silk Harvest Restaurant with Qsine, Le Petit Chef Experience* . <https://www.cruisecritic.co.uk/news/4080/> adresinden alındı
- Çerkez, M. &. (2020). Yiyecek-İçecek İşletmelerinde Yapay Zekâ Kullanımı. *Türk Turizm Araştırmaları Dergisi*, 4(2), 1264-1278.
- Çerkez, M. v. (2022). Geleceğin Restoranlarında Mutfak (İçinde; Geleceğin Restoranları). P. D. BAŞ içinde, *Dijitalleşme 2* (s. 230-237). Ankara: Detay Yayıncılık.
- Davutoğlu, N. A. (2019). Turizm 4.0'dan Gastronomi 4.0'a Giden Yolda: Geleceğin . *Akademik Sosyal Araştırmalar Dergisi*, s. 8-109.
- Doğan, M. (2023). YİYECEK VE İÇECEK SEKTÖRÜNDE ENDÜSTRİ 4.0 UYGULAMALARI: GASTRONOMİ 4.0 . 11. *Uluslararası Mardin Artuklu Bilimsel Araştırmalar Kongresi*, (s. 7-11). Mardin.
- Fourtané, S. (2018, Ağustos 30). *Interestingengineering*. Discover the Virtual Reality Cocktail Bar: The Place For The Drinks of the Future.: <https://interestingengineering.com/innovation/future-of-drink-an-augmented-reality-experience> adresinden alındı
- Gençoğlu, C. &. (2023). Dijital Çağda Sporcu Beslenmesi Ve Yapay Zeka. Dijital Çağda Spor Araştırmaları. P. D. Kışalılı içinde, *Dijital Çağda Spor Araştırmaları* (s. 91). Erzurum: Özgür Yayınları.
- Hall, M. &. (2003). The consumption of experiences or the experience of consumption? M. S. Hall içinde, *An introduction to the tourism of taste in Food Tourism Around the World Development, management and markets*. London: I. Series Butterworth-Heinemann an Imprint of Elsevier Linacre, Burlington.
- Hazarhun, E. &. (2020). Restoranlarda Dijital dönüşüm: Touch restoran örneği. *Gastroia: Journal of Gastronomy and Travel Research* , 4(3) 384-399.

- Huang, A. C. (2021). When Artificial Intelligence Meets the Hospitality and Tourism Industry: An Assessment Framework to Inform Theory and Management. *Journal of Hospitality and Tourism Insights*.
- İcestylecg. (tarih yok). 3D Rendering illustration of a cutting-edge food production method. *3D-printed fish flesh that's all set to be cooked*. Shutterstock - <https://www.shutterstock.com/tr/image-illustration/3d-rendering-illustration-cuttingedge-food-production-2309010029?consentChanged=true>.
- Izdebska, J. &-T. (2016). 3D Food Printing–Facts and Future. *Agro FOOD Industry Hi* , 27(2), 33-37.
- Jang, H. W. (28.04.2020). Serving Robots: Management and Applications For Restaurant Business Sustainability. *Sustainability MDPI*, 12(0), 1-15.
- Jia, F. W. (2016). Investigating the feasibility of supply chain-centric business models in 3D chocolate printing: A simulation study. *Technological Forecasting and Social Change*, 102-202-213.
- Keskin, E. &. (2021). Gastronomi 4.0 Üzerine Kavramsal Bir Araştırma. *Gastroia: Journal of Gastronomy and Travel Research*, 177-198.
- Kimes, S. E. (2008). The role of technology in restaurant revenue management. *Cornell Hospitality Quarterly* 49(3), , 297-309.
- Kiraz, G. (2020). Değişen Turizm Trendleri ve İncili Restoranların Müşteri Profili. (Master's thesis, Eastern Mediterranean University (EMU)-Doğu Akdeniz Üniversitesi (DAÜ)), 19-25.
- Kuday, M. (2021). Konaklama İşletmelerinde Sosyal Medya Araçlarının Pazarlama Aracı Olarak Kullanılması Üzerine Bir Çalışma: Bodrum Yarımadası Örneği. *Master's Thesis, Aydın Adnan Menderes Üniversitesi Sosyal Bilimler Enstitüsü*.
- Kumar, N. K. (2016 Şubat). Ethical aspects and future of artificial intelligence. *In 2016 International Conference on Innovation and Challenges in Cyber Security*. Greater Noida, India.
- Lukanova, G. v. (2019). Robots, Artificial Intelligence and Service Automation in Hotels. *S. Ivanov and C. Webster: Robots, Artificial Intelligence, and Service Automation in Travel, Tourism, and Hospitality* (s. 157-183). içinde England: Emerald Publishing Limited.
- Morris, K. (2021, kasım). *ktchnrebel*. Is food service heralding in the virtual environment: <https://www.ktchnrebel.com/metaverse-virtual-future-gastronomy/> adresinden alındı
- Otero, C. (2017). Flippy, Un Automata Que Hace Hamburguesas A Media Jornada. BeTech. Özsoylu, A. F. . *Endüstri 4.0. Çukurova Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi* 21(1), , s. 41-64.
- Öztürk, H. M. (2020, 09 28). Teknolojik Gelişmeler Ve Gastronomi Alanına Yansımaları: Gastronomi 4.0. *Güncel Turizm Araştırmaları Dergisi*, 4(2), , s. 222-239.
- Pieska, S. L. (2013). Social Service Robots İn Wellness And Restaurant Applications. *Journal of Communication and Computer* 10(1), , s. 116-123. .
- Samala, N. K. (2022). Impact of AI and Robotics in the Tourism Sector: A Critical Insight. *Journal of Tourism Futures*, 8(1): , s. 73 87. .
- Spence, C. &-F. (2013). Technology at the Dining Table. *Flavour*, 2(1), 16. . *Spence and Piqueras-Fiszman Flavour*, s. Technology at the Dining Table. *Flavour*, 2(1), 16. .
- Sun, J. P. (2015). A review on 3D printing for customized food fabrication. *Procedia Manufacturing*, 308-319.
- Şahin, H. (2023). Turizmde Dijital Gelecek: Seyahat, Konaklama, Rehberlik ve Gastronomide Teknolojik Trendler ve Yenilikçi Uygulamalar. H. Şahin içinde, *Yeni Nesil Gastronomi Deneyimleri Dijital Teknolojilerin Gastronomi Sektöründe Kullanımı ve İnovasyonları*. Detay Yayıncılık.
- Toksöz, D. &. (2016). Turistlerin seyahat motivasyonlarında yöresel mutfağın rolü. *Journal of Tourism and Gastronomy Studies*, s. 174 - 189.
- Uzan, Ş. B. (2020). Gastronomideki Robotik Uygulamalar Ve Yapay Zekâ. *Tourism And Recreation*, 2(2), , s. 46-58. .
- Yildiz, Z. (2011). Turizmin Sektörünün Gelişimi ve İstihdam Üzerindeki Etkisi. *Visionary Suleyman Demirel University The Journal of Visionary*, 3(5), , s. 54-71.
- Yu, C. E. (2020). Humanlike robots as employees in the hotel industry: Thematic content analysis of online reviews. *Journal of Hospitality Marketing & Management*, s. 29(1) 22-38.
- Zoran, A. G. (2021). Cooking with computers: the vision of digital gastronomy. *In Gastronomy and Food Science* (pp. 35-53). Academic Press. .

EVALUATION OF FENNEL (FOENICULUM VULGARE) PLANT IN TERMS OF ITS USE IN TURKISH CUISINE

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Introduction

Türkiye is one of the most important genetic diversity and plant-rich countries in the world due to its structure, favorable ecological conditions, different climate types and rich flora. Fennel stands out as a nutritious and health-beneficial herbaceous plant, thanks to its ability to grow naturally in the wild and to provide high yields when cultivated. The fact that almost all parts of fennel, which is widely used especially in the pharmaceutical and cosmetic sector, are edible, from root to leaf, is a significant advantage in the context of sustainability and ecogastronomy. In this context, it is essential to consider both the herbal properties and the historical use of fennel to better utilize it in kitchens.

Fennel

Foeniculum vulgare Mill. is one of the species of Umbelliferae (Apiaceae), the parsley family, and is classified into two types as “*Foeniculum vulgare* Miller subsp. *vulgare* var. *vulgare* (bitter fennel)” and “*Foeniculum vulgare* Miller subsp. *vulgare* var. *dulce* (Miller) Batt. & Trab. (sweet fennel)” (Koru, 2019: 4). This plant has been known and cultivated for many years. The natural and cultivated forms belong to a single species and the genus *Foeniculum* contains only one species (*vulgare*) in the world (Dirican & Telci, 2016: 293). In Türkiye, fennel is known by various local names such as rezene, raziyane, arapsaçı, çumra, ısıra, meletüre, sincilip, irziyan, mayana (Baytop, 1999: 359). It is known as acı soğan (bitter onion) in the Western Black Sea and marata in Crete. (Hançerli, 2011: 11). Fennel, which is researched and consumed more abroad than in Türkiye, takes its name from the Latin word “foenum” which refers to “dry forage” because of its appearance (Metz, 2009: 672). It is called “fennel” in English, “rezene” in Turkish, “fenouil” in French, “finocchio” in Italian, “hinojo” in Spanish and “fenchel” in German (European Medicines Agency, 2008: 2). When the relevant literature is examined, Koru (2019: 4) defines fennel as a long-lived, herbaceous plant that grows to about 1-1.5 meters in height and forms large clumps. The fruits are 6-10 mm long and 1.5-4 mm thick, oval, slightly curved, brownish-green or yellowish in color. They are usually stalked, hairless, and belong to a perennial herbaceous plant

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(Kooti et al. 2015: 2). It has a thick and taproot. Strong lateral roots are formed from this root, especially the year after planting. Its roots can reach depths of 1-2 meters. It has a spring-like scent and a mildly pungent flavor (Hedge & Lamond, 1972; Baytop, 1984:312). In addition to being obtainable from the wild, its rapid growth, ability to resist adverse conditions, ease of harvesting, and ease of processing are among its other positive aspects when cultivated agriculturally. In Türkiye, the sowing period is usually in the fall or from the beginning of April to the end of May. It can be sown using a seeder or manually by hand. Significant irrigation is required, especially during the initial planting period. The harvest typically occurs between June and October, depending on climate and planting conditions. Crops become suitable for harvesting during their growth phase, particularly when the grains begin to turn yellow (Ayırtman, 2015: 20).

Agricultural production of fennel, which is widely used in pharmacy and food industry with its rich flavones and essential oils, has increased in recent years. In fennel essential oil, 16 essential oil components were identified. As a major component, trans-anethole, a component that stands out with its antimicrobial effect, is the most prominent (Balkan, 2015: 28). Numerous in vitro and in vivo studies have shown that fennel has a wide range of pharmacological properties, including antimicrobial, antiviral, antioxidant, anti-inflammatory, antimutagenic, analgesic, antipyretic, antispasmodic, anticholinergic, antithrombotic, antitumor, apoptotic, blood sugar-lowering, lipid-lowering, liver-protective, memory-enhancing, chemoprotective and lactation-enhancing effects (Rafieian et al. 2024: 6924) According to research on mice, the glucose-lowering effect of fennel has been detected (Dayıoğlu, 2005: 40). According to research on rats, the cholesterol-lowering effect of fennel has been detected (Özbek et al. 2006: 177). Fennel is beneficial not only for increasing breast milk but also for alleviating digestive issues such as bloating, gastritis, diarrhea, constipation, irritable bowel syndrome, and stomach pain. Additionally, it has shown positive effects in managing menopausal symptoms (Rahimikian et al. 2017: 1019). Fennel is seen to be effective in solving digestive problems. Fennel tea, the most frequently consumed form of fennel, is prepared by drying or grinding its seeds. The seeds of fennel are used in fish and poultry dishes for their fragrance and aroma. The sweet and fragrant root part, which resembles an onion under the soil, is generally used in salads, especially in North Africa and European countries, as well as in baked, grilled or boiled dishes. In the Aegean region, it is commonly prepared and consumed as a dish (Köse, 2019: 1). In some regions of Türkiye, it is also used in the production of floury and sugary foods (Çelik, 2022: 81).

The historical uses of fennel

The history of fennel is believed to date back to a time before humanity transitioned to settled life. Archaeological studies have revealed clues suggesting that people used natural plants not only as food but also for medicinal purposes. In this context, it is believed that the history of both humanity and the plant dates back to 60,000 years ago, based on the plant seeds found in the grave during the archaeological excavations conducted in Shanidar Cave in Iraq in 1957 (Aygün, 2019: 1). During the Roman Empire, fennel was used in the treatment of some eye diseases (Yılmaz Kolancı, 2020: 632). Gaius Pliny Secundus, the author of *Naturalis Historia*, one of the greatest works that survived from the Roman Empire, used fennel in the treatment of 22 different diseases, believing that snakes eat wild fennel and can improve their eyesight by shedding their skin. Hippocrates, on the other hand, suggested that fennel, which is still frequently used today, can help pregnant women increase milk yield. Fennel is an aromatic herb used for years by the Romans, Chinese and Indians as an antidote for poisonous mushrooms, dog bites and snake bites. The ancient Egyptians used it as a food as well as a treatment. In the Middle Ages, it was hung on doors to ward off evil spirits. Fennel has long been used as a spice and appetite suppressant in England and as a medicinal elixir in Switzerland. Native American Indians used to chew fennel seeds as a mouth freshener (BAKA, 2020: 20). The commercial importance of fennel emerged due to its therapeutic effects and it was among the first plants cultivated in Asia, Africa and Europe. (Haşimi et al. 2014: 20). Today, the negative effects of synthetic drugs on human health and the medical and economic problems caused by them have led to a resurgence in the popularity of herbal treatments in recent years. In this context, the medical use of fennel has risen, particularly due to its effects on breast milk (Koru, 2019: 13). Besides its consumption as a food, fennel is also widely used in the cosmetics industry, especially for its essential oil properties.

Fennel usage in Türkiye

Türkiye is among the richest countries in the world in terms of medicinal and aromatic plants, thanks to its macroclimate and regional climate. Its flora comprises 174 families, 1251 genera, and over 12,000 species and subspecies of medicinal and aromatic plants, of which 3,750 are endemic (Kendir & Güvenç, 2010: 55). Türkiye's phytogeographic richness is due to its location at the intersection of three floristic regions (Irano-Turanian, Mediterranean and Euro-Siberian in order of diversity). In addition, factors such as geomorphological structure, soil diversity, elevation differences and vegetation cover have influenced this diversity (Tel et al. 2023: 1057). Although the exact number of plants used for medicinal purposes in Türkiye is unknown, it is estimated

to be around 500. Approximately 100 medicinal and aromatic plants found in Anatolia have export potential (Karik & Öztürk, 2009: 22).

In Türkiye, the word herb generally refers to plants collected from the wild without being cultivated. Hundreds of different plants are believed to be used in traditional folk medicine practices. Nevertheless, the number of plants traded is around 350, of which approximately 140 are exported (Ayırtman, 2015: 1). Many plants that grow in Türkiye or for which the growing conditions are suitable are not cultivated. Among these, plants such as fennel, which are completely utilized from root to leaf, are rare. Fennel is a plant that has been cultivated effectively in recent years. Although it is generally cultivated to harvest the seeds for tea, in recent years, the root part, also called the bulb, has also been cultivated. The homeland of wild fennel, which is generally used as a vegetable, is the Mediterranean. Burdur in particular leads the production of fennel in Türkiye. In addition, Afyon, Isparta, Uşak, Bursa, Konya, Denizli, Gaziantep, Manisa, Antalya and Mardin are among the cities where fennel is cultivated in limited areas. According to TURKSTAT (TÜİK) 2019 data, the highest production amount is in Tefenni district of Burdur (1,963 tons), followed by Çeltik district of Konya (1,530 tons), Karamanlı district of Burdur (480 tons) and Korkuteli district of Antalya (375 tons). (BAKA, 2020: 14). Tefenni Fennel and Karamanlı Fennel are noteworthy as products that have received the TSE geographical indication mark. Fennel is among the medicinal plants that Türkiye exports more than it imports.

Use of Fennel in Gastronomy

Plants have been one of the main food sources of humanity since ancient times. People have divided herbs into two groups as useful (fragrant, aromatic) and useless (all other herbs) (Koç Apuhan & Beyazkaya, 2019: 32). Local herbs and vegetables are of great importance for the promotion of regional cuisines. Today, with the development of the gastro-tourist phenomenon, interest in gastronomy activities has increased not only in large destinations but also in regional and small destinations. The main driver of this phenomenon is thought to be the desire to discover local culture and the stories of food as well as new flavor experiences (Şimşek & Selçuk, 2018: 29). In this context, the importance of fennel plant, which can be utilized as local herbs and little-known vegetables with its root part and seeds, cannot be denied in the direction of the development of local gastronomy. The white, fist-sized vegetable part of fennel is one of its important benefits due to its high levels of vitamins and minerals. With this ratio, fennel ranks as the plant with the highest iron content after spinach and chanterelles. In 100 g of fennel vegetable, there are 110 mg magnesium, 109 mg calcium, 93 mg vitamin C, and about 50 calories (Mete, 2009: 675).

The use of Fennel as a food ingredient in Türkiye

Turkish cuisine has a long history and a rich diversity. While soups, meat dishes, pastries, and legumes are predominantly used, each region also has its own unique variety of herb consumption (Badayman et al. 2018: 53). Türkiye is home to numerous endemic herbs, thanks to the diverse climate and soil conditions of its geography. Wild plants are commonly used both for their healing properties and for their unique flavors. In particular, ritualized collection and processing practices for certain herbs are observed in rural areas of Türkiye. As they have done throughout history, the people of Anatolia today collect and process as many herbs as they need, especially from the mountains and green areas in their immediate surroundings. Many parts of the herbs found in Anatolia are collected with the belief that they possess healing or flavor properties and are used in kitchens either raw, roasted, dried, as fillings, or through fermentation.

The main use of fennel in Türkiye is the consumption of its tea. The basic understanding in brewing the tea is to increase the efficiency of fennel by revealing the abundant and various volatile oils in its content. Fennel tea with other volatile components, especially anethol, is one of the most widely used products to increase breast milk. It is also used in the production of some alcoholic and non-alcoholic beverages due to its essential oils and aroma. Fennel is a herbal product with carminative, stomach relaxing, eye strengthening, digestive facilitator, depressive relaxant, heart palpitations and reducing abdominal pain in children. (Kaya et al. 2004: 2). Studies have shown that fennel lowers blood and brain glucose levels and has positive effects in stressful times (Özyılmaz, 2015: 7). Although there is a lack of sufficient awareness about fennel consumption in Türkiye, most of the fennel produced is utilized in the domestic market. In addition to tea, there are some lesser known areas of use. Among these are Adıyaman Peksimeti (Taplama) and Şanlıurfa Külünçesi. In these products, fennel seeds are generally used, and fennel aroma prominently stands out as the main flavoring. On the other hand, onion-like roots and stems are frequently used, especially in Mediterranean and Aegean cuisine. It is one of the most commonly used herbs in the cuisine of Cretan immigrants in Türkiye. The stem, the fennel-like part of the stem, and the onion-like root part are utilized in separate dishes. It has been used in a variety of dishes both for its flavor and its health benefits (Karaca et al. 2014: 5).

Some recipes using Fennel in Türkiye

In this section, the extent to which fennel, which has a natural distribution in Türkiye and is not used much in daily life in kitchens other than tea, can be utilized in gastronomy has been investigated. In this direction, it is seen that fennel is used as the main product in some foods in Turkish Cuisine and as a

flavoring in others. Fennel, along with artichoke, celery, leek, and various herb roasts, is frequently used in olive oil-based dishes (such as Fennel Pilaf in the Karabakh region) and in pastries (e.g. Fennel Pastry), incorporating both its root and herbaceous leaves. Some products with different names but similar production techniques were evaluated within the similar recipe. Different studies can be carried out to bring these products with different names into the literature. In this context, the recipes of the products containing fennel were extracted under subheadings and tried to be included in the literature.

- **Adıyaman Bayram Taplaması**

Adıyaman is a historical city with a deep-rooted culinary culture, located in Southeastern Anatolia, with the climate and vegetation characteristics of Eastern Anatolia and the Mediterranean regions. It has many geographically marked products including various dishes, desserts, nuts and fruits. Especially the use of legumes and cereals in its cuisine attracts attention (Yeşilyurt et al. 2017: 175). There are some regions where the fennel plant grows naturally also. Although fresh fennel is used in salads and pancake (hitap), dry fennel is mainly used. The most common product in which dried fennel is used is “taplama”, a type of rusk, also known as “kıllori”. Rusk has been consumed throughout history by various nations, especially during wars, especially because it is consumed for a long time without spoiling and gives energy (Yüksel & Çağlar 2024: 1).

For making rusk, flour, oil, sesame (küncü), fennel (mayana), milk, yeast are kneaded together without adding water. A hard dough is obtained and left to stand for 4-5 hours. A large walnut-sized meringue is taken, rolled out lengthwise, cut into slices and baked in the oven. The sample known as Taplama is rolled out thinner and baked (Yeşilyurt et al. 2017: 88) In Adıyaman, it is made in neighborhood bakeries, especially on special occasions such as religious holidays. Over time, it has become a cultural tradition and been commercialized through continuous production (Karahana & Kılınççeker, 2021: 354). If it is stored in airtight containers after cooling, it will maintain its freshness for a long time. There are regions where it continues to be made by a traditional communal work method (imece method) in order to pass it down from generation to generation (Türkoğlu et al. 2022: 224). Külünçe, which is made in the Şanlıurfa region, is prepared with very similar ingredients and technical processes too. Külünçe is kept alive as a continuation of the tradition of unity and solidarity, just like Taplama. (Onur et al. 2016: 178). Antep Köy Kahkesi, a protected geographical indication product containing chickpea yeast and mayana (fennel), which is made in Gaziantep especially during Ramadan feasts, is one of the bakery foods similar to this product.

Table 1: Adiyaman Bayram Taplaması Recipe

Ingredients	Quantity	Unit	Calories
Butter	150	grams	1075 kcal
Vegetable oil	90	milliliters	800 kcal
Yogurt	125	grams	75 kcal
Eggs	2	piece	77 kcal
Granulated sugar	150	grams	500 kcal
Milk	200	milliliters	45 kcal
Flour	500	grams	1900 kcal
Baking powder	5	grams	2 kcal
Sesame seeds	10	grams	70 kcal
Black cumin seeds	15	grams	55 kcal
Dried fennel	10	grams	5 kcal
Instructions	<p>1- Sift the flour and baking powder into a large mixing bowl and make a hollow pool in the middle. Add all other ingredients.</p> <p>2- When it is completely homogenized and a slightly hard dough is obtained, break pieces from the dough, first roll them and then press on them to give them a flat and evenly flat shape.</p> <p>3- Place them on the baking tray, brush them with egg yolk (if possible, remove the haspir or zeric extract) and bake them in a stone oven at 225-250°C for about 5 minutes.</p>		

- **Cretan style fennel with meat**

Crete is an island in the Aegean Sea. In Crete, besides having a rich variety of herbs, the use of olive oil is also very high. Cretan cuisine, where herb dishes are consumed very frequently from past to present, is also known as Green Table (Çevik & Saçılık 2011: 505). Those who migrated from Crete to Turkey brought their culinary culture with them.

This meal is made by using the onion-like root and leaves of fresh fennel, also known as Maratha by the people of the region who migrated from Crete. It is frequently used for its flavor and aroma as well as its health benefits. In Crete, the traditions are continued as onions are not added to okra, shevketibostan and maratha (Karaca et al. 2014: 5). In the Antalya region, tomatoes are also added. The portion is approximately 350 kilocalories also making it both nutritious and low in calories.

Table 2: Cretan Style Fennel with Meat Recipe

Ingredients	Quantity	Unit	Calories
Fresh fennel	1	piece/kilograms	300 kcal
Lamb meat	500	grams	1250 kcal
Carrot	1	piece	40 kcal
Olive oil	100	milliliters	880 kcal
Flour	20	grams	75 kcal
Lemon juice	100	milliliters	60 kcal
Water	200	milliliters	0 kcal
Salt	15	grams	0 kcal
Black pepper	10	grams	25 kcal
Yogurt	125	grams	75 kcal
Instructions	<p>1- After cleaning and trimming the fresh fennel, chop it into equal sizes to make about 1 kg.</p> <p>2- First, cook the meat in a large pot. After letting it release and reabsorb its juices for about 10 minutes, add the carrots along with olive oil and continue sauteing.</p> <p>3- After the sauteing process continues for about 10 minutes over low heat, add water. First add the stalk and then the root parts of the fennel after a few minutes.</p> <p>4- After adding the fennel, cook for another 20 minutes. Then, add the spices. Yoghurt, flour, and lemon are mixed and gently added to the dish.</p> <p>5- The fennel dish (maratha), which has absorbed its water for about 15 minutes, is ready to be eaten. It can be served warm and with toasted bread if desired. The juice of one orange can be squeezed and added on top.</p>		

• Cretan fennel with dried beans

Cretan immigrants live in various cities in Turkey, especially on the Mediterranean and Aegean coasts. This is because the climate and plant diversity of these regions are similar to Crete (Aladağ 2013: 162). One of the most well-known dishes of Crete is fennel with beans.

This meal is made using the dill-like green leafy part of fennel, locally also known as arapsaçı. In the Cretan region, it is also called “selena” and fritters are also made from it. Its use in this dish is commonly said to occur especially when wild fennel is harvested, and if the fennel root has not grown to a sufficient size, the leaves are collected and utilized. A portion is approximately 200 kilocalories.

Table 3: Cretan Fennel with Dried Beans Recipe

Ingredients	Quantity	Unit	Calories
Fresh fennel	200	grams	90 kcal
Beans	300	grams	1250 kcal
Onion	1	piece	45 kcal
Olive oil	80	milliliters	700 kcal
Flour	20	grams	75 kcal
Lemon juice	50	milliliters	30 kcal
Water	200	milliliters	0 kcal
Salt	15	grams	0 kcal
Black pepper	10	grams	25 kcal
Instructions	1- Boil the beans that were soaked overnight. 2- Roast the onion in olive oil over low heat. 3- Add the cleaned fennel greens (arapsacı) on top and continue sautéing together for a while. 4- After a few minutes, add the boiled beans and pour hot water over them. 5- After cooking in this way for 10 minutes, flour and lemon are mixed to form a seasoning and added to the dish.		

- **Fennel with egg**

Fennel grows wild in various parts of Turkey and is collected by local people (Okcu 2016: 3). It is roasted in various regions, and there are also those who add eggs to it due to its protein efficiency. For this reason, this fennel dish with egg becomes a healthy and nutritious dish. It is important to utilize every part of fennel. The leaves of fennel, which remain after the stems are removed, are also used for breakfast. Some people also cook it with cheese.

Table 4: Fennel with Egg Recipe

Ingredients	Quantity	Unit	Calories
Fresh fennel	100	grams	90 kcal
Eggs	300	grams	1250 kcal
Vegetable oil	80	milliliters	560 kcal
Salt	10	grams	0 kcal
Black pepper	5	grams	12 kcal
Instructions	1- Finely chop the cleaned wild fennel leaves and sauté them in a little oil. Cook over low heat for about 10 minutes until softened. Optionally, cheese can be added at this stage. 2 - Whisk 3 eggs in a bowl with with salt and black pepper. Other spices can be added according to your preference. 3- Add the egg and cover it with a lid and let it cook over low heat with steam. It is ready in a few minutes and can be sliced and eaten without cooling.		

- **Pickled fennel**

Various fermented vegetable products are produced in different parts of the world. Among these, fennel pickles, which are not preferred much, are one of the fermented products made in Türkiye. Pickled fennel, which has antimicrobial properties in addition to being beneficial for stomach and intestinal health, is one of the best ways to strengthen the immune system and preserve it for long-term consumption. It can also be mixed and combined with various other ingredients.

Table 5: Pickled Fennel Recipe

Ingredients	Quantity	Unit	Calories
Fresh fennel	500	grams	450 kcal
Dried fennel	10	grams	5 kcal
Orange	200	grams	100 kcal
Water	600	milliliters	0 kcal
Sea salt	50	grams	0 kcal
Granulated sugar	20	grams	100 kcal
Apple cider vinegar	500	milliliters	105 kcal
Instructions	1- Cleaned fennel stems and root are sliced thinly in equal sizes. 2- 1 piece Orange peel and membrane are cleaned and sliced. 3- Boil water, vinegar, sugar and Salt in a pan. 4- Add all the ingredients into a jar and add dry fennel seeds. 5- After keeping it at room temperature for 5-6 days, it is ready to eat.		

- **Fennel salad with orange**

Fennel is suitable for use in salads in all its parts, especially the green leafy, dill-like parts. It can be used in many types of salads due to its flavor, nutritiousness and being a healthy product. Fennel salad is a light and nutritious salad. It is popular in restaurants along the Mediterranean coast and especially in cuisines that focus on healthy eating.

Table 6: Fennel Salad with Orange Recipe

Ingredients	Quantity	Unit	Calories
Fresh fennel	100	grams	45 kcal
Orange	400	grams	200 kcal
Red onion	1	piece	45 kcal
Olive oil	50	milliliters	550 kcal
Green olives	100	grams	150 kcal
Lemon juice	20	milliliters	10 kcal
Salt	15	grams	0 kcal
Instructions	1- Clean the peel and membrane of 2 pieces of oranges and slice them. 2- Slice fennel, onion and olives very thinly. 3- Add the sliced ingredients into a bowl, then add lemon juice and olive oil. 4- Optionally, it can be diversified with protein additions.		

- **Baked sea bass with fennel**

Fish is a good product as it is easy to flavor. Especially in unflavored or lean fish, combining it with a nutritious herb such as fennel is important. With this fennel fish dish, fennel can be a healthy and delicious alternative to the classic seafood side dishes. Moreover, there is information indicating that dry fennel seeds are used in fried fatty fish (Güney et al. 2022: 1724).

Table 7: Baked Sea Bass with Fennel Recipe

Ingredients	Quantity	Unit	Calories
Fresh fennel	500	grams	150 kcal
Sea bass	1	piece	1250 kcal
Parsley	Half	bunch	30 kcal
Dill	Half	bunch	20 kcal
Scallion	Half	bunch	35 kcal
Olive oil	50	milliliters	550 kcal
Bay leaf	20	grams	1 kcal
Butter	100	grams	720 kcal
Potato	4	piece	700 kcal
Salt	15	grams	0 kcal
Black pepper	10	grams	25 kcal
Dried fennel	25	grams	15 kcal
Instructions	1- Finely chop the spring onion, fresh fennel, dill and parsley and add them in a large bowl. 2- Dry a cleaned piece of sea bass and place it on a greaseproof paper tray. 3- Fill the prepared mixture into the belly of the fish. Butter cut into cubes is also added to the fish. The process is completed by adding bay leaves in between. 4- Cut the potatoes into apple slices and place them around the fish by adding oil, fennel and other spices as desired. 5- Bake in a preheated 180°C oven for 30 minutes. Serve while hot.		

- **Fennel soup**

This fennel soup is a light, aromatic and digestively beneficial soup made with fresh fennel, especially in Aegean and Mediterranean cuisines. Except for the conservative Cretan immigrants who often use traditional methods, those who do not often use fennel usually prepare it with potatoes, onions, courgette and preferably cream in addition to fennel.

Table 8: Fennel Soup Recipe

Ingredients	Quantity	Unit	Calories
Fresh fennel	500	grams	150 kcal
Onion	1	piece	50 kcal
Potato	1	piece	150 kcal
Carrot	1	piece	10 kcal
Water	500	milliliters	0 kcal
Yellow lentils	75	grams	50 kcal
Olive oil	20	milliliters	200 kcal
Butter	50	grams	350 kcal
Lemon juice	20	milliliters	10 kcal
Salt	15	grams	0 kcal
Black pepper	10	grams	25 kcal
Dried fennel	25	grams	15 kcal
Turmeric	10	grams	25 kcal
Cumin	10	grams	35 kcal
Instructions	<p>1- Put the pot in which the soup will be prepared on the stove, add olive oil and butter and melt them.</p> <p>2- When the oil gets hot, add chopped onion into the pot and saute for about 2 minutes. Then add diced Carrot, green apple, fennel and Potato into the pot and continue to roast the ingredients.</p> <p>3- When the ingredients are roasted well, add yellow lentils and water; stir the mixture well.</p> <p>4- Cook the soup over high heat for 20-25 minutes, stirring occasionally. If you are using a pressure cooker, cooking for 10 minutes is enough. When the cooking time is over, remove the soup from the stove and puree it with a blender.</p> <p>5- Add salt and spices, stir and put the soup back on the stove. Add lemon juice to the soup and cook for 2-3 more minutes.</p> <p>6- When serving, ladle the soup into bowls and sprinkle fennel leaves or red pepper flakes on it.</p>		

- **Fennel roast**

This is a roux dish made with fresh fennel, especially in Aegean and Mediterranean cuisines. Except for the Cretan immigrants who often use traditional methods, those who do not usually prepare it with potato, onion and preferably cream in addition to fennel. There are also those who add minced meat. In this dish, the dill-like green parts of the fennel are added after cooking, so every part of the fennel is utilized.

Table 9: Fennel Roast Recipe

Ingredients	Quantity	Unit	Calories
Fresh fennel	500	grams	150 kcal
Onion	1	piece	50 kcal
Eggs	2	piece	100 kcal
Olive oil	50	milliliters	500 kcal
Lemon juice	20	milliliters	10 kcal
Salt	15	grams	0 kcal
Black pepper	10	grams	25 kcal
Chili pepper	25	grams	25 kcal
Turmeric	10	grams	25 kcal
Cumin	10	grams	35 kcal
Instructions	1- The root parts of the fennel are cleaned and washed. Then the cleaned fennel is chopped into 2 finger-sized pieces. 2- Put olive oil in the pan and roast the previously chopped onions. Then the chopped fennel is placed on it and the roasting process is continued at the same temperature. 3- Then spices are added. During all these processes, the fire should be low and the lid should be closed. 4- Finally, stir with egg yolk and lemon juice, cook and serve hot.		

- **Fennel tea**

It is a mild tea. Consumption is limited in infants and children (Zeller et al. 2006: 3686). It has effects such as prolonging the lactation period in mothers and relieving gas pains in babies (Şanlı et al. 2008: 18). It is recommended to consume hot. After flavoring the water with dried fennel, a base is obtained that can be used in marinades, flavoring dishes and sherbets.

Table 10: Fennel Tea Recipe

Ingredients	Quantity	Unit	Calories
Dried fennel	8	grams	4 kcal
Water	200	milliliters	0 kcal
Instructions	1- Fennel seeds are added to the glass or teapot and brewed. 2- After the fennel is brewed for 5 minutes, the seeds are filtered and drunk.		

Conclusion

In this study, both general characteristics of fennel and, its historical use was mentioned, it was also evaluated from a multidisciplinary point of view. Some different fennel recipes were prescribed, and it was demonstrated that it is an important product in terms of both economic and health if its consumption is increased, supported by the literature. Fennel has been used both as food and for therapeutic purposes for centuries. On the contrary, fennel has not been able to develop in direct proportion to the interest in organic and sustainable products that has developed in Türkiye in recent years. Fennel has the potential

to be an important product both in terms of its benefits for human health and ecogastronomy if it has the necessary recognition. Fennel, as a plant belonging to the same genus known by different names in different regions of Türkiye and the world, should be included in the literature through academic studies. Studies on fennel should be diversified and increased both in the medical and agricultural sense and in food and beverage issues. In this way, it will be possible to add it to the literature with more different features. In this context, it is thought that fennel can be a good example of an ecogastronomy product if the ways of evaluating Türkiye's vegetation are determined and then fennel is introduced to the kitchens both in the literature and by systematic promotion. The positive contributions of fennel, especially if it is used as food and its agricultural production is increased, are among the subjects recommended to be investigated in the next studies.

References

- Aladağ, H. N. (2013) Kemalizm ve Bektaşilik İlişkinini Girit Mutfak Kültürü Üzerinden Okumak. In, Ü. Güneş (Ed.), II. Türkiye Lisansüstü Çalışmalar Kongresi Bildiriler Kitabı-I, 161-169. Bursa: 6-8 May 2013.
- Aygün, C. (2019) Çorum ilinde yetişen bazı yenilebilir yabancı otların tespiti, sağlık açısından faydaları ve yemeklerde kullanım şekilleri. Master's thesis. İstanbul: İstanbul Okan University, Institute of Social Sciences.
- Ayrırtman, S. (2015) Farklı azot seviyelerinin rezene (*Foeniculum vulgare* var. *dulce*)'nin verim, verim özellikleri ve uçucu yağ oranı üzerine etkisi. Master's thesis. Erzurum: Atatürk University, Institute of Science.
- Badayman, M., Dinçel, E., & Alçay, A. Ü. (2018). Çiriş otu ve Türk mutfağında kullanımı. *Aydın Gastronomy*, 2(1), 51-55.
- Balkan C. (2015) Rezene (*Foeniculum dulce* Miller) uçucu yağının verimine ve bileşimine partikül boyutunun etkisi. Master's thesis. Ankara: Ankara University, Institute of Science.
- Batı Akdeniz Development Agency, (2020) *Rezene Tarımı ve Endüstrisi Fizibilite Raporu*. Antalya: Batı Akdeniz Kalkınma Ajansı Yayınevi.
- Baytop, T. (1984). *Türkiyede Bitkiler ile Tedavi*. İstanbul: İstanbul Üniversitesi Yayınevi.
- Baytop, T. (1999) *Türkiye'de Bitkiler ile Tedavi. Geçmişte ve Bugün*. 2nd ed. İstanbul: Nobel Tıp Yayınevi.
- Çelik, M. (2022) Geleneksel Bir Bayram Çöreği: Şanlıurfa Külünçesi. In, Y. Oğan (Ed.), *Gastronomi Alanında Tematik Araştırmalar I*, (80-86). Konya: Çizgi Yayınevi.
- Dayıoğlu, S. (2005) Stresli fareler (*Mus musculus*)'in beyin ve karaciğerlerindeki toplam lipid ve toplam glukoz seviyelerine paxil, kedi otu (*Valeriana officinalis*), rezene (*Foeniculum vulgare*) ve oğul otu (*Melissa officinalis*)'nun etkileri. Master's thesis. Dumlupınar University, Institute of Science.
- Dirican, A., Telci, İ. (2016) Tokat Florasında Doğal Yayılış Gösteren Rezene Popülasyonlarının Morfolojik ve Kalite Özelliklerinin Belirlenmesi. *Ege Üniversitesi Ziraat Fakültesi Dergisi*, 53 (3), 293-299.
- European Medicines Agency, (2008) Assessment Report on *Foeniculum vulgare* Miller. 1-23.
- Rafieian, F., Amani, R., Rezaei, A., Karaça, A. C., & Jafari, S. M. (2023). Exploring fennel (*Foeniculum vulgare*): Composition, functional properties, potential health benefits, and safety. *Critical Reviews in Food Science and Nutrition*, 64(20), 6924–6941. <https://doi.org/10.1080/10408398.2023.2176817>
- Güney S., Duman G., Güleç H., Karaer A., Sarper F. (2022) Türk Mutfağında Balıkların Baharatla Kullanımı: Ankara Balık Restoranları Örneği. *Journal of Tourism and Gastronomy Studies*, 10(3), 1716 - 1744.
- Hançerli, H. Y. (2011) *Girit Mutfağının Çukurovadaki İzleri*. Adana: Hançerli Yayınları.
- Haşimi, N., Tolun, V., Kızıl, S., Kılınç, E. (2014) Anason (*Pimpinella anisum* L.) ve Kimyon (*Cuminum cyminum*) Tohumlarının Uçucu Yağ İçeriği, Antimikrobiyal ve Antioksidan Özelliklerinin Belirlenmesi. *Journal of Agricultural Sciences*, 20, 19-26.
- Hedge, I.C., Lamond, J.M. (1972) *Foeniculum* Miller. P.H. Davis (Ed.), *Flora Turkey*, Vol. 4, 376-377.
- Karaca O., Yıldırım O., Çakıcı A. (2015) Girit Yemek Kültürü ve Sürdürülebilirliği. *Journal of Tourism and Gastronomy Studies*, 3(1), 3-13.
- Karahan, A. M., Kılınççeker, O. (2021) Adıyaman Çöreği (Tablama)'nın Bazı Özellikleri. *Adıyaman Üniversitesi Mühendislik Bilimleri Dergisi*, 8 (15), 353-358.
- Karik, Ü., Öztürk, M. (2009). Türkiye Dış Ticaretinde Tıbbi ve Aromatik Bitkiler. *Bahçe*, 38, 21-31.
- Kaya, İ., İncekara, N., Nemli, Y. (2004) Ege Bölgesi'nde Sebze Olarak Tüketilen Yabancı Kuşkonmaz, Sirken, Yabancı Hindiba, Rezene, Gelincik, Çoban Değneği ve Ebegümecinin Bazı Kimyasal Analizleri. *Yüzüncü Yıl University Journal of Agricultural Sciences*, 14, 1-6.
- Kendir, G., Güvenç, A. (2010). Etnobotanik ve Türkiye'de Yapılmış Etnobotanik Çalışmalara Genel Bir Bakış. *Hacettepe University Journal of the Faculty of Pharmacy*, 49-80.
- Koç Apuhan, A., Beyazkaya, T. (2019) Bingöl'ün yenilebilir yabancı bitkilerinin gastronomi turizmine etkisi üzerine bir araştırma. *Tourism and Recreation*, 1, 31-37.

- Koru, T. (2019) *Foeniculum Vulgare* Miller (Rezene) Bitkisinin Fitoterapide Kullanımı, Master's thesis. İzmir: Ege University, Institute of Health Sciences.
- Kooti, W.; Moradi, M.; Akbari, S.; Sharafi-Ahvazi, N.; AsadiSamani, M.; Ashtary-Larky, D. (2015). Therapeutic and pharmacological potential of *Foeniculum vulgare* Mill: A review. *Journal of HerbMed Pharmacology* 4 (1):1-9.
- Köse, A. (2019) Göller Bölgesinde anason ve rezenede fungal hastalık etmenlerinin belirlenmesi. Master's thesis. Isparta: Isparta University of Applied Science, Graduate Education Institute.
- Mete, O. (2009) *Kabalıcı Şifalı Bitkiler Ansiklopedisi*. İstanbul: Kabalıcı Yayınevi.
- Okcu, M. (2016). Gümüşhane Florasında Yabani Olarak Yetişen Rezene (*Foeniculum* spp.)'lerin Bazı Özelliklerinin Belirlenmesi. *Gümüşhane Üniversitesi Fen Bilimleri Dergisi*, 6(1), 1-12.
- Onur, N., Süren T., Güllü M. (2016) Şanhurfa yöresine özgü geleneksel bir çörek: Külünçe. *SOBİDER The Journal of Social Sciences*, 3, 176-183.
- Özbek H., Cengiz N., Him A., Uğraş S., Özgökçe F., Erdoğan E. (2006) Yüksek kolesterolli diyetle beslenen sıçanlarda *Foeniculum vulgare* P. mill. (rezene) tohumlarının kan kolesterol seviyesi üzerine etkisi. *Genel Tıp Dergisi*, 16 (4). 175-180.
- Özyılmaz, B. (2015) Farklı yörelerden temin edilen tatlı rezene (*Foeniculum vulgare* var. dulce) populasyonlarının karakterizasyonu. PhD thesis. Tokat: Gaziosmanpaşa University, Institute of Science.
- Rafieian, F., Amani, R., Rezaei, A., Karaça, A. C., & Jafari, S. M. (2023). Exploring fennel (*Foeniculum vulgare*): Composition, functional properties, potential health benefits, and safety. *Critical Reviews in Food Science and Nutrition*, 64(20), 6924-6941.
- Rahimikian, F., R. Rahimi, P. Golzareh, R. Bekhradi, and A. Mehran. (2017). Effect of *Foeniculum vulgare* Mill.(fennel) on menopausal symptoms in postmenopausal women: a randomized, triple-blind, placebo-controlled trial. *Menopause* 24 (9):1017-1021.
- Şanlı, A., Karadoğan, T., Baydar, H. (2008) Doğal Olarak Yetişen Tatlı Rezene (*Foeniculum vulgare* Mill. var. dulce)'nin Farklı Büyüme ve Gelişme Dönemlerinde Uçucu Yağ Miktarı ile Bileşenlerinin Belirlenmesi. *Ziraat Fakültesi Dergisi*, 3, 17-22.
- Şimşek, A., Selçuk, G. N. (2018) Gastro Turistlerin Tipolojisinin Belirlenmesi: Gaziantep Ölçeğinde Bir Uygulama. *Uluslararası Türk Dünyası Turizm Araştırmaları Dergisi*, 3, 28-43.
- Tel, A.Z., Ortaç, İ., İlçim, A. & Özusul, E., (2023) Mersin İlindeki (Türkiye) Bazı Doğal ve Kültürel Sit Alanlarının Floristik Yapısı Üzerine Bir Çalışma. *Kahramanmaraş Sütçü İmam Üniversitesi Tarım ve Doğa Dergisi*, 26 (5), 1056-1065.
- Türkoğlu, T., Sandıkçı, M., Saraç, Ö. (2022) Adıyaman Bayram Taplamasının Somut Olmayan Kültürel Miras Kapsamında Değerlendirilmesi. *TÜBA-KED Türkiye Bilimler Akademisi Kültür Envanteri Dergisi*, (26), 217-230.
- Yeşilyurt, A. G. H., Yeşilyurt, A. G. C., Güler, A. G. O., & Özer, Ö. G. S. (2017). Otel İşletmelerinin Menülerinde Yöresel Yemek Kültürünü Yaşatmak: Adıyaman Örneği. In F. Alaeddinoğlu (Ed.), *International West Asia Congress of Tourism (IWACT'17) The Book of Full-Text* (ss. 173-182). Erzurum: 28 September - 1 October 2017.
- Yılmaz Kolancı, B. (2020) Roma İmparatorluk Dönemi'nde Göz Hastalıklarının Tedavisinde Kullanılan Bazı Tıbbi Bitkiler. *Gaziantep University Journal of Social Sciences*, 19, 629-646.
- Yüksel, F., Çağlar, S. (2024). In vitro glyceimic index, acrylamide content, and some physicochemical and sensorial properties of special dried bread (Peksimet) enriched with einkorn wheat (*Triticum monococcum* L.) flour. *Journal of Food Science and Technology*, 1-9 <https://doi.org/10.1007/s13197-024-06035-8>.
- Zeller, A., Horst, K., Rychlik, M. (2009). Study of the metabolism of estragole in humans consuming fennel tea. *Chemical research in toxicology*, 22(12), 1929-1937.

ASSESSMENT OF ZENGIBAR WALKING ROUTE WITHIN THE CONTEXT OF ECOTOURISM AND TOURISM DEVELOPMENT

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Introduction

Since the earliest times in history, people have felt the need to travel repeatedly for various reasons, such as religion, trade, health, and similar factors. As a result of the development of travel, the concept of tourism has emerged. The concept of tourism today is emerging as a growing and evolving concept, which continues to develop and diversify, gaining increasing value both worldwide and in Turkey. Tourism contributes to the creation of new job opportunities in a region, the preservation of the area, and its economic development. Tourism activities are increasingly taking on a global dimension, and new markets are emerging. Alternative tourism is one of these developments. In recent years, there has been a shift in expectations related to tourism. Different methods of travel have come to the forefront, and tourists' preferences have changed. Travel is no longer only for the purpose of rest and sightseeing; it also emphasizes the desire to discover new places, explore, and seek adventure (Kulak, 2024: 20). Ecotourism, which is one of the branches of alternative tourism, is considered one of these types of tourism.

The concept of ecotourism, also known as nature tourism, is described as a sustainable form of tourism that protects the environment, considers the well-being of the local population, and preserves sensitivity towards natural areas. One of the activities included in this type of tourism, which aims to be environmentally conscious, is hiking. Hiking is an important recreational activity that continues to exist within ecotourism activities. Recreation refers to activities that allow individuals to rejuvenate physically, mentally, and socially, and to rediscover themselves by using their leisure time (Özşaker, 2024: 6). This recreational activity, carried out by individuals or groups, is becoming increasingly popular day by day. One of the destinations where hiking activities are actively carried out is the city of Konya, which served as the capital of the Seljuk Empire for many years. With a wide range of tourism opportunities, the city of Konya continues to be an important ecotourism region through its nature hiking routes.

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In this study, general information is provided about the Zengibar Hiking Trail, which is planned to be one of the hiking routes in Konya province, with the objectives of increasing the region's tourism innovation and entrepreneurship capacity, diversifying tourism, and spreading tourism activities throughout the year. The aim is to introduce this hiking trail to tourism. In this context, it is believed that the tourism potential of Konya province can be enhanced by promoting and introducing this hiking trail to tourism. The study introduces the historical and cultural richness of the Isauria region (Zengibar Castle, Astra Ancient City) along with its natural beauty, detailing three separate routes extending from Bozkır to Çetmi Highlands. It evaluates the ecotourism potential of the Zengibar Hiking Route in terms of sports, environment, culture, and economy, aiming to contribute to the regional economy and tourism appeal in line with sustainable tourism principles. The study focuses on the ecotourism potential of the route through these dimensions: promoting healthy and recreational activities in the sports dimension, preserving natural beauty and biodiversity in the environmental dimension, highlighting the historical and cultural heritage in the cultural dimension, and contributing to the regional economy through tourism in the economic dimension.

This study consists of two sections. In the first section, the concepts of tourism, alternative tourism, nature tourism, hiking, Konya, and hiking trails are discussed, and the relationships between these concepts are examined. The following section provides detailed information about the history of the Zengibar - İsaırua Region and the characteristics of the trail.

Tourism

Tourism has emerged as a result of the travels that humanity has made for various reasons, either individually or in groups, throughout history. By the end of the 19th century, concepts related to tourism began to be fully defined. The concept of tourism is derived from the Latin word "tornus," which means to leave a settled area and return. The concept of tourism was first defined by Guyer-Feuler in 1905. According to this definition, tourism is a modern phenomenon that enables societies and individuals to come closer to each other, driven by people's increasing needs for rest and climate change, the desire to explore landscapes enriched by natural beauty and artistic elements, the belief that nature evokes a sense of happiness in people, and the significant development of transportation facilities (Şahin, 2022: 7-8).

According to the Turkish Language Association (2023a), tourism is defined as "a journey made for purposes such as rest, entertainment, exploration, and learning". In other words, it is described as "all activities carried out with economic, cultural, and technical measures taken to attract tourists to a country or region".

Tourism is the act of traveling undertaken by individuals or groups for various reasons such as sports, rest, health, faith, gaining experiences, entertainment, visiting relatives, or attending various conferences or seminars. However, for these travels to be considered tourism activities, it is necessary that the traveler does not settle in the destination and does not seek economic gain from the journey. In addition, tourists must stay at least one night at the destination they visit and demand products or services offered by businesses operating in the tourism sector (Ayhan, 2022: 5).

Based on the definitions obtained from the literature review, tourism is described as the entirety of actions resulting from the travels and trips made by individuals, provided they stay for a certain period. In today's ever-growing tourism sector, people have started to seek different experiences for various reasons, leading to the emergence of alternative forms of tourism.

Alternative tourism

The tourism sector, known for its significant contributions to the national economy, is an important field for countries. Therefore, countries continuously increase the importance they place on the tourism sector. As a result, it is likely to encounter various issues in this area. Expanding and diversifying the tourism sector plays a crucial role in solving these problems. Alternative tourism activities hold a significant place among these solutions (Öztürk & Yazıcıoğlu, 2002: 1).

Countries are in constant competition with each other as they make the most effective use of their tourism capacities to gain a larger share of tourism revenues. In this competition, the concept of alternative tourism holds an important place. The diversification of tourism into broader areas and the desire to preserve nature by removing harmful factors and maintaining its natural state have played a significant role in the emergence of alternative tourism. Additionally, several perspectives have been presented regarding the reasons for the formation of the concept of alternative tourism. The concept of sustainable tourism is exemplified by offering visitors different experiences or activities, a growing disinterest in conventional tourism, and the enhancement of tourism potentials (Çelik, 2018: 194-195).

The diversification and development of the tourism sector have led to the emergence of various types of alternative tourism. According to the Ministry of Culture and Tourism of the Republic of Turkey (KTB, 2023a), these alternative tourism types are health and thermal tourism, cave tourism, hunting tourism, winter tourism, plateau tourism, congress tourism, yacht tourism, golf tourism, silk road tourism, religion tourism, air sports tourism, mountaineering tourism, scuba diving, river – rafting tourism and bird watching.

- **Health and thermal tourism**

Health and thermal tourism is a type of tourism that arises from the use of facilities such as physical therapy, diet, psychotherapy, mineral-rich thermal baths, exercise, mud baths, etc., to find solutions to health problems. It also includes the use of these facilities for recreation and entertainment purposes (Çelik, 2018: 197-198).

- **Cave tourism**

The visit of caves for tourism purposes is referred to as cave tourism. As a type of ecotourism, cave tourism receives significant attention in Turkey due to its geological resources. Turkey is characterized as a cave paradise, with approximately 40,000 caves located within the country. The caves in Turkey hold significant potential in terms of tourism diversity (KTB, 2023b).

- **Hunting tourism**

Hunting tourism is a type of alternative tourism that meets the various needs of individuals. It involves hunting activities organized through establishments such as hunting businesses and agencies. As an activity conducted in close contact with nature, it helps to distance people from the ordinary and meets various personal needs (Şafak, 2003: 135).

- **Winter tourism**

Winter tourism is a type of alternative tourism that includes winter sports such as skiing, conducted in regions with heavy snowfall where snow can remain for long periods. Due to its geographical features, Turkey is a highly suitable destination for winter tourism (Bozdemir & Şengül, 2021: 36).

- **Plateau tourism**

According to the Turkish Language Association (2023b), plateaus, which are described as “flat areas suitable for grazing animals or resting, located at high altitudes,” are among the most preferred types of alternative tourism due to their fresh and cool air, relaxing qualities, and tranquility. These plateaus are often chosen by people living in large cities who are tired of the noise and pollution of urban life.

- **Congress tourism**

It is a type of alternative tourism where people travel for professional purposes, including concepts such as symposiums, conferences, etc. Due to its transportation infrastructure, cultural diversity, and geographical location, Turkey holds an important place in the field of congress tourism (Eren & Alaşhan, 2020: 17).

- **Yacht tourism**

Yacht tourism is a type of alternative tourism conducted through the use of a sea vessel called a yacht, carried out for various purposes such as cruising,

and takes place in locations like marinas, coves, and bays. Surrounded by seas, Turkey is one of the important locations for yacht tourism (Sezer, 2012: 105).

- **Golf tourism**

Golf tourism is a type of tourism where people travel to a different region specifically to participate in the sport of golf. The primary purpose of this type of tourism is to engage in golf activities (Çetin, 2008: 4).

- **Silk road tourism**

Anatolia has been one of the most strategic regions in the world since ancient times and has played a significant role as a crossroads of many historical routes. One of the most important of these routes is the Silk Road, which started in the east of Asia, extended westward, and reached Europe by passing through Anatolia. The Silk Road kept many cities and ports in Anatolia vibrant, and caravanserais were built along the route. The tourist and recreational activities in this region are known as Silk Road Tourism (Çelik, 2018: 200).

- **Religion tourism**

Tourist visits made with the intention of seeing sacred sites to perform religious duties, outside of the places where people live, are referred to as religious tourism. However, journeys made by religious officials for work purposes are not considered part of religious tourism (KTB, 2023c).

- **Air sports tourism**

Journeys made by individuals, for purposes other than commercial ones, to engage in sports activities such as the study of aerial sports, using air transportation outside of their place of residence, are referred to as air sports tourism (Diker et al., 2016: 89).

- **Mountaineering tourism**

It is an alternative form of tourism that involves recreational activities requiring various equipment and sufficient knowledge, focused on mountains due to their clean air, scenic views, and various activities. This type of tourism is frequently preferred in Turkey due to its mountains.

- **Scuba diving tourism**

According to Yaşar (2011: 36), underwater diving tourism is a type of tourism that involves promotional, sports, and educational dives aimed at exploring, photographing, filming, or engaging in sport fishing in underwater ecosystems, including plants, animals, and historical-cultural riches. It also includes the accommodation and services provided on the shore in relation to these activities.

- **River – rafting tourism**

There are various types of rivers in Turkey. Rivers provide suitable environments for water sports such as swimming, canoeing, and rafting, which are referred to as river tourism. Most of the rivers in Turkey are suitable for these activities. River tourism is considered a part of nature tourism (Çelik, 2018: 196).

- **Bird watching tourism**

Birdwatching is an alternative form of tourism that involves recreational activities aimed at identifying and observing birds. Turkey, which is located along the migration routes of birds, holds an important place for the development of this type of tourism (Çelik, 2018: 200).

- **Nature tourism and hiking**

The term ecotourism, which is the shortened form of ecological tourism, refers to a tourism approach that emerged in the 1980s and aims to protect nature without causing harm to it. The growing recognition worldwide of the negative impacts of tourism activities on natural and cultural resources, and how these negative effects jeopardize tourism, has led to the development of alternative forms of tourism that allow for the longer use of resources. In addition, nature-themed content published in the media and the environmental awareness education provided by educational institutions have contributed to making multiple locations more recognized. For these reasons, nature tourism has become one of the fastest-growing forms of alternative tourism, and countries have started to place more emphasis on this field. Today, the desire of people, who have become increasingly detached from nature, to reconnect with it is growing. As a result, interest in nature tourism has begun to rise. The increasing environmental awareness and changing holiday concepts can be cited as the main reasons behind this growing interest (Akgül, 2023: 21-22).

As a result of the growing interest in nature tourism, various recreational activities have begun to gain prominence. One of these recreational activities is hiking. Hiking is a recreational activity performed individually or in groups outside the city, aimed at purposes such as love for nature, the desire to escape from crowds and seek silence, engaging in physical activity, relaxation, socializing, and observing natural areas (Erhan & Erhan, 2023: 123-124).

Participating in nature hikes not only allows individuals to explore the beauty of nature but also has positive effects on their overall health. These types of hikes take advantage of the stress-reducing effects of environmental elements. The tranquility of nature, green spaces, clean air, and the natural environment help participants relax. From a physical perspective, nature hikes tend to reduce the levels of stress hormones such as adrenaline and cortisol in

the body. Research has shown that nature hikes lower blood pressure, reduce heart rate, and slow down breathing rates. Additionally, hiking in nature can increase the release of happiness hormones such as serotonin and endorphins. These hormones help individuals feel good and experience happiness (Çam, 2024: 27).

Nature hiking is a more significant activity compared to nature tours conducted by means of vehicles, as it involves closely observing and thoroughly examining natural areas while continuously exerting physical effort and willpower. Nature tours are generally considered more as tourist trips. One of the important features of nature hiking is that it helps individuals develop their willpower and endurance. Nature hiking is known as one of the most popular nature sports due to reasons such as its low cost, the minimal risk of injuries, and the fact that it does not require excessive physical conditioning. Nature sports can carry certain risks in some cases. It is important for individuals participating in these activities to be careful and cautious. To prevent potential injuries, participants need to be not only well-informed but also equipped with the appropriate gear (Yıldız, 2024: 12). The necessary equipment varies depending on seasonal conditions. Examples of such equipment include hiking boots, water bottles, compasses, first aid kits, windbreakers, hats, trash bags, and backpacks (Durmuş et al., 2007: 5-6).

Overall, nature hiking is a form of tourism that holds significant importance for human health, both psychologically and physically. It can be performed individually or in groups, involves varying levels of difficulty, is carried out with specific equipment, and must be initiated with the guidance of an experienced guide. It is a type of nature tourism that should not be confused with activities like nature climbing.

Durmuş et al. (2007: 6-10) in their study state that there are difficulty levels ranging from 1 to 6 in nature hiking. These are:

- **Difficulty level 1:** This level has very few inclines, with minimal elevation gain. The ascents do not exceed 100 meters. The trails along the route are wide. It can be completed in 2 hours or less. It is suitable for individuals who are new to nature hiking.
- **Difficulty level 2:** The incline level is low at this level. These routes include ascents that do not exceed 300 meters, and the walking duration does not exceed 3.5 hours, which is longer than the Level 1 routes. It is suitable for individuals who have participated in Level 1 routes.
- **Difficulty level 3:** At this level, the incline starts to increase, and the ascents do not exceed 500 meters. The walking time does not exceed 5 hours, and the route may pass through narrow paths, wooded areas, or

dry regions. This level is suitable for individuals who are experienced in nature hiking.

- **Difficulty level 4:** The incline increases further compared to Level 3, and the ascents do not exceed 700 meters. The walking conditions are similar to those of Level 3, but the trails are in worse condition. This level, which does not exceed 6.5 hours, is suitable for individuals who are in good physical condition and health.
- **Difficulty level 5:** At this level, the incline significantly increases, with ascents exceeding 1000 meters. The route passes through densely wooded areas that are quite challenging, with some wet sections. It also includes rocky and pathless areas. The walking time can reach up to 8 hours and is suitable for experienced hikers.
- **Difficulty level 6:** In this level, the duration of the hike exceeds 8 hours, and the incline gradually increases, reaching up to 1500 meters. Challenging terrain conditions are prominent, and camping is sometimes possible along the way for overnight stays. This level is suitable for healthy individuals with experience, endurance, responsibility, and similar qualities.

Hiking and Konya

Konya province, with its significant tourism potential, holds an important position not only in cultural tourism but also in various types of alternative tourism. In this context, when considering the level of Konya's potential in alternative tourism types such as cultural, cave, religious, health, hunting, congress tourism, and others, it becomes clear that tourism in Konya has the potential to develop further (Ulusan & Batman, 2010: 243). One of the alternative tourism types that Konya offers is nature hiking, which falls under the category of nature tourism. The city's cultural and natural values are well-suited for nature tourism activities.

Konya has several hiking routes. In his study, Tekin (2017: 384-396) described the daily hiking routes planned for Konya as follows:

- **Beyşehir district hiking routes**

It covers areas such as Yeşildağ, Dumanlı, İslibucak Plateau, Kurucuova, Gölyaka Gürlevik Spring, and Kubadabat Palace in the Beyşehir district. The hike starts from the Yeşildağ region of Beyşehir and continues towards Dumanlı. It is easier to reach İslibucak from this route, as the terrain gradually descends. Then, the route moves towards the Kurucuova region. Upon reaching Gölyaka, hikers can visit the waterfall, known as Gürlevik Waterfall by the locals. Additionally, the ruins of Kubadabat Palace, located by the shore of Lake Beyşehir, can be explored. With a difficulty level of 5, this route offers an impressive experience for mountain hiking enthusiasts.

- **Akören district hiking routes**

The first hiking route, which starts from Akören Center, heads towards May Stream. This route has a difficulty level of 5 and a total length of 18.7 km. Another route starts from Akören and heads towards the canyon known as Mavi Boğaz. Mavi Boğaz is a natural wonder located south of Avdan Village, within the Akören district, where the Çarşamba Stream flows. This route is 36 km long, and its width ranges from 20 to 120 meters. With a difficulty level of 2, this route offers a more relaxed experience for nature hikers.

- **Karapınar district hiking routes**

Karacadağ Mountain hiking route is starting from the vicinity of Yeşilyurt Village, located 23 km from Karapınar, this route progresses towards the summit of Karacadağ, which is 2100 meters high. The difficulty level of this route is 6.

Karapınar Erosion Field Trekking Route is begins from the Karapınar Erosion Field and continues with the exploration of the sinkholes (obruk). The difficulty level of this route is 1.

- **Hadim district hiking routes**

Kaplanlı Village - Dülgerler Village nature hiking route is starting from Kaplanlı Village, this hiking route progresses towards Göksu Valley, following the Göksu River and passing through Yağcı Village. Then, it leads to Yerköprü Waterfall. The route continues towards Çiftepınar Village and the hike concludes around Dülgerler Village.

- **Seydişehir district hiking routes**

Seydişehir caravan route is begins at Beldibi, reached by following the roads from Konya, Seydişehir, and Antalya. The hiking trail is 14 km long and offers a route with an elevation of 1600 meters.

Oğlakçı Village - Kovalı Lake - Dipsiz Lake - Elmas City hiking route is starting from Oğlakçı Village, which is reached by following the route from Seydişehir Çavuş Village, the hike continues through Kovalı Lake, Dipsiz Lake, and reaches Elmas City on Elvas Hill, where it concludes.

- **Meram district hiking routes**

Meram Kilistra – İnlice Mountain hiking route is starting from Kilistra, this route passes over a mountain known as Alisumas Mountain and continues towards İnlice village in the Meram district. With a total length of 33 km and elevation changes of 2000 m, 1700 m, and 1500 m, this route is classified as difficulty level 6.

Hiking Route Starting from Yeşil Tekke Village route is heads towards Sultandediği Mountain and features a trail with an elevation of 2260 meters.

Erenkaya Village hiking route is starting from Erenkaya Village, this trail has an elevation of 2010 meters and offers a route that continues for 10 km towards Erenkaya Mountain.

Zengibar - Isauria Region

Isaura is an ancient settlement located in the Toros Mountains, between the Hacılar and Ulupınar neighborhoods in the Bozkır district of Konya province in the Central Anatolia region. The city is notable for the well-preserved remains of its city walls and tombs (Doğanay, 2008: 16). Life in the ancient city has not continued for approximately 900 years. Today, the area is not under any official protection, and tourists can visit the site on their own. The region is also known as Isaura Vetus or Isaura Palaea (Doğanay, 2016: 392). The Zengibar Castle located there is often confused with a similarly named castle in the Darende district of Malatya, but they are not the same.

History of Isauria

Isaura is surrounded by the Taurus Mountains, making it a rugged and isolated area (Kurt & Atcı, 2020: 407). The region of Isaura is sometimes referred to in sources as the Isauria Dekapolis, representing the 10 cities located in the Kalykadnos (Göksu River) basin. These cities are: Germanicopolis (Ermenek), Titiopolis (Anamur), Dometiopolis (Katranlı), Zenopolis (Elmayurdu), Neapolis (Kanlıdivane), Claudiopolis (Mut), Irenopolis (Sarıvadi), Diocaesarea (Uzuncaburç), Lauzadus (Başyayla), and Dalisandus (Sınabiç) (Pilhofer, 2018: 19).

The Isaurians, an aggressive mountain people who lived independently for many years, spoke the Isaurian language (Kurt, 2018: 114). During the Macedonian invasion, when the city was besieged, the Isaurians, unwilling to submit and be conquered, set fire to the city to prevent its occupation (Erdoğan, 2019: 111). Afterward, the Isaurians, upon finding a large amount of melted gold among the ashes of the burned city, rebuilt and fortified it, continuing their lives there (Diodoros, 1838: 22). Around 240 years later, in 75 BC, the Romans destroyed the city and its associated settlements, turning it into a ruin. The local people were so fierce that, due to the significant event of Isaura's destruction, Roman General Publius Servilius came to be known as Isauricus (Kurt & Karakuş, 2023: 150). Later, the region was governed by the Galatian king Amyntas, who constructed a new city in a nearby area using the stones from the old city. Although the city later split into two separate towns, Isauria Palea and Isauria Nova, both spoke the same language (Strabon, 2000: 65). The site known today as Zengibar Castle is the ancient city of Isauria Nova. Located at an altitude of 1816 meters, this city was surrounded on three sides by cliffs and encircled by strong walls 4 kilometers long. It was a city that housed around 10,000 people. Around 265 AD, the leader of the Isaurian tribe, Trebellianus,

captured the city and declared himself Roman emperor, even minting his own coins, but he was killed shortly thereafter. In the following years, the region was suppressed by the Byzantines through wars, and another notable feature of the area is that many Byzantine emperors were of Isaurian origin (Altun, 2016: 11). Over time, as Byzantine nobles and soldiers were granted land in the region, the city experienced an influx of people, which led to the domestication of the local population (Erdoğan, 2019: 110). Over the years, the city gradually lost its grandeur and fell into decline. In 1097, the region, including Isauria, was captured by the Seljuk Turks, and various principalities established control over the area. The Ottoman rule in the region began in 1451 and continued until modern times.

Isaura is also an important region in the history of religions. Studies indicate that Saint Paul preached in Claudiopolis, the only Roman colony in the area and a city connected to Isaura (modern-day Mut), as part of his missionary work (Pilhofer, 2018: 113). The Isaurians, who quickly embraced Christianity, were initially governed by the Patriarchate of Antioch. However, by the early 8th century, they came under the jurisdiction of the Patriarchate of Constantinople. Since Isaura is not mentioned in the hierarchical list of church officials known as *Notitiae Episcopatum*, historians believe it was part of the Leontopolis (Bozkır) bishopric (Beşaltı, 2022: 104). During the time the city was inhabited, it is noted that approximately 27 churches existed in the region.

Zengibar Castle

Zengibar Castle, one of the rare surviving ancient cities in Central Anatolia, is the largest ancient city in Konya. Located on a high mountain, the castle is surrounded on three sides by cliffs. Due to its strong fortifications and strategic location, it is believed to have been the capital of Isaura. The Asar Mountain, where the castle stands, dominates many surrounding settlements, suggesting that its construction here was particularly favored for geopolitical reasons (Doğanay, 2016: 399). The castle walls, in some places exceeding 3 meters in thickness, are a testament to its robust construction. The castle, with its unique natural surroundings, holds undeniable significance for religious tourism and archaeological tourism. The rock tombs in Zengibar are shaped as part of a necropolis (Doğanay, 2008: 62). Monuments, gates, tombs, walls, and watchtowers found within the castle are valuable historical remnants (Erdoğan, 2019: 59). However, many of the historical artifacts in the castle and surrounding city have been damaged. Over the centuries, significant destruction was caused primarily by treasure hunters, as well as by the local population (Doğanay et al., 2017: 324). Due to its difficult-to-access geography and the lack of comprehensive tourism planning, Zengibar Castle has not been fully integrated into tourism.

Astra (Temaşalık) Ancient City

Astra, a town settlement associated with Isaura, is an archaeological site where Roman influence is strongly evident, and it contains significant structures and inscriptions (Doğanay & Aydaş, 2024). Located near the village of Bolat, within the boundaries of Hadim District in Konya Province, Astra is an important site in the region. According to studies, the most important remaining artifacts from the city are the ancient theater and the city council (Bouleuterion). The first study of the city was conducted by J.R.S. Sterret in 1885, during which the city's name was uncovered. The seven inscriptions found in the area indicate that the public works were funded by the donations (euergesia) of the citizens (Kurt, 2018: 140). Based on the data gathered from the Astra inscriptions, it is clear that the local culture, along with the influences of Hellenistic and Roman societies, played a major role in shaping the social life (Kurt & Atcı, 2020: 412).

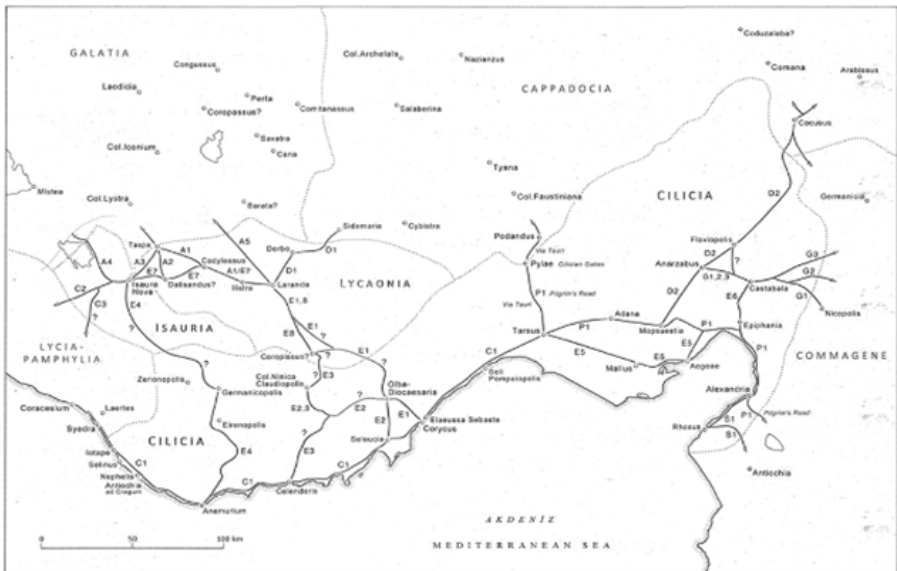
In Isaura, it was common for the dead to be placed in tombs that were carved into the rock, but research in the ancient city of Astra has shown that, at one point, the dead were cremated, and their ashes were placed in urns, a practice evidenced by archaeological finds. Additionally, the use of osteothecae (bone chests) and stelae (stone monuments) was particularly common in Astra. Some inscriptions found in the region suggest the influence of Persian rule, showing that there was a Persian cultural impact during the period of Persian domination (Doğanay, 2008: 52).

Historical roads of Isauria

The Roman Empire placed great importance on roads for safe and swift access, and one of the most important roads in Anatolia, Via Sebaste, which was used by Saint Paul, lies within the borders of Konya. In ancient times, one would travel from Isauria to Iconium using the Lystra road. Additionally, a southern route connected to Laranda allowed access to coastal cities along the Mediterranean. This road, to the north, connected to cities such as Sylla, Kilistra, Iconium, Misthia, and Laodikeia, linking them to Via Sebaste (Çelik, 2007: 29). To facilitate access to the region, two main roads were constructed by Emperor Augustus. One of these roads began from Pisidia Antioch, passing through Neapolis and Mistheia, and then continued across Lake Suğla (Trogitis) to reach Isauria, eventually leading to Side (Arslan, 2014: 15).



Map 1: Roads of Lykaonia District (Çimen, 2011: 156)



Map 2: Cilicia, Isauria and Lycaonia Regions and Their Roads (French, 2014: 14)

Zengibar Hiking Routes

The route consists of three consecutive stages and has a total length of approximately 94 kilometers. Along the route, there are various historical sites and ancient cities, as well as several settlements where active life continues. The route benefits from a significant advantage in terms of food and water supply, due to the settlements located along or near the path. The trail passes

through steep slopes, paths, canyons, rivers, and forests. To ensure that hikers do not get lost, rocks along the route are painted with red and white marks to indicate the path. In addition, technological tools with artificial intelligence support and navigation can also be used (Erbay, 2024: 124). The difficulty level of the hike has been determined according to the study conducted by Durmuş et al. (2007: 5-6).

Bozkır - Zengibar Castle - Bağbaşı (Eğiste)

Starting from a location close to the center of Bozkır city, this route has a total length of 33 kilometers. The average moving time is approximately 8 hours, while the total time for completing the route is around 13 hours. The trail is technically of medium difficulty (difficulty level 4), with both elevation loss and gain exceeding 900 meters. The elevation of the route increases to 1,763 meters at Zengibar Castle, and then decreases to around 1,200 meters as it continues to Bağbaşı Dam. The route starts from the southern part of Bozkır district and proceeds southeast towards Tepearası Village. Upon reaching the north of Tepearası Village, a crescent-shaped path is drawn towards Küçükhisarlık Village. After passing through Küçükhisarlık, the route continues north following the Yazdamı road. After passing through Yazdamı Village, the route leads to Zengibar Castle, the historical site of the ancient city of Isauria, about 2.5 kilometers later. Along this route, hikers will encounter numerous historical remnants such as ancient road remains, fountains, and necropolises. As the route descends southeast of Zengibar Castle, a 2.5-kilometer walk leads to Işıklar Village. Continuing in the same direction, after walking 7 kilometers, Yelbeyi Village is reached. Along this stretch, a water well and an arched fountain are located about 1 kilometer apart. After passing through Yelbeyi Village, and walking approximately 1 kilometer further, the route continues through the picturesque Bağbaşı Dam and its surrounding natural beauty, eventually reaching Eğiste Village, where the route ends.



Photograph 1: Monumental Ruin of the Ancient City of Isauria



Photograph 2: Wall of Zengibar Castle



Map 3: Bozkır - Zengibar Castle – Bağbaşı (Eğiste) Rotue



Photograph 3: Yelbeyi Water Well



Photograph 4: Bağbaşı Dam

Eğiste – Ilıcapınar

The Eğiste - Ilıcapınar route, starting from Eğiste Village, is 35 kilometers long. The highest elevation point of the route is approximately 1,770 meters, while the lowest point is around 1,030 meters. The technical difficulty of the route is classified as level 5. The walking duration exceeds 10 hours, and the total time to complete the route is close to 15 hours. Along the route, the elevation loss is around 1,150 meters, and the elevation gain is approximately 950 meters. The route begins by heading 2.5 kilometers south of Eğiste Village, then turns 1.6 kilometers northwest towards Bolat Village. From Bolat Village, the path continues southwest for 5 kilometers, parallel to the highway, to reach Bolat Plateau. The elevation increases up to this point. At Bolat Plateau, the route passes through the ruins of the ancient city of Astra, which is a rocky site. The mountain on which Astra is located marks the highest point of the route, and after passing this area, the elevation begins to decrease. Afterward, the path continues eastward for 9 kilometers, crossing the Çumra – Hadim highway, then continues for another 3 kilometers to reach the Kalınağıl – Mernek junction. The area overlooking Kalınağıl Village is known for the Kalınağıl Canyon, a region famous for its natural beauty, with the Balçılar (Gökdere) Stream flowing through it. After this junction, the direction shifts southward, and the marked trail is followed for 9 kilometers to reach Mernek Village. From Mernek Village, the route proceeds for 5 kilometers to the Korucu Bridge, which is located on the Balçılar Stream and was built during the Ottoman

period. Then, after walking 3 kilometers, the path reaches the Sazak Üçköprü (Three Bridges) in Sazak Village. After crossing the bridge, the route continues for another 2 kilometers and crosses the Ilıcapınar Bridge, leading to Ilıcapınar Village, where the route ends.



Map 4: Eğlste - Ilıcapınar Rotue



Photograph 5: Kılınçlı Canyon



Photograph 6: Korucu (Sucular) Bridge



Photograph 7: Sazak Taşkent Üçköprü Bridge



Photograph 8: Sazak Taşkent Üçköprü Bridge



Photograph 9: Korucu (Sucular) Bridge

Ilıcapınar - Çetmi Plateaus

Starting from Ilıcapınar Village and ending at Kaynarımuğar Plateau, this route is a total of 26 kilometers long. The route begins at an elevation of 1,120 meters, with the highest point being the peaks of Çetmi Plateaus at 1,850 meters near the end of the trail. The route features significant elevation gain and loss, and its technical difficulty has been rated as level 5. Throughout the route, the elevation loss is approximately 1,200 meters, while the elevation gain exceeds 2,000 meters. The walking duration is about 12 hours, and the total time to complete the route is estimated to be 15 hours. The route begins by crossing the Ilıcapınar Bridge over the Balcılar Stream, located on the eastern bank of the stream north of Ilıcapınar Village. From here, the trail continues 3.5 kilometers along the eastern bank of the Balcılar Stream, reaching the Bük Location Bridge, which crosses back to the western bank. Another 2 kilometers further leads to Afşar Tepecik Village. From the southern part of this village, the route progresses southeast for 10 kilometers to reach Bolay Village at an elevation of 1,550 meters. In this section, the route passes around the Afşar Dam. From the south of Bolay, the path continues 1 kilometer south, followed by 1.5 kilometers eastward to the junction of Ayıboğazı Canyon and Çetmi Road. After this, the route heads south along the canyon for 1.5 kilometers before taking a C-shaped curve, advancing 6 kilometers along a dry and rocky path. Finally, the trail reaches the Kaynarımuğar Plateau at an elevation of 1,820 meters, marking the end of the route. While this route is shorter in distance compared to others examined in the study, it is more challenging due to the rugged terrain. As a result, it is considered both more dangerous and more exhausting.



Map 5: Eğiste - Ilıcapınar Rotue



Photograph 10: Ilcapınar Bridge



Photograph 11: Afşar Dam



Photograph 12: Hikers Using the Rotue



Photograph 13: Çetmi waterfall view from above

Evaluation of the Route in Terms of Ecotourism

When evaluating a nature hiking route, it is important to consider various subdimensions. These dimensions include the general attractiveness of the route, user experience, safety, and sustainability. Studies on nature sports show that these activities provide economic, cultural, environmental, and physical benefits to individuals (Barut et al., 2019). In this section, the Zengibar Hiking Route is assessed within the scope of ecotourism, with explanations provided in terms of the dimensions of sport, environment, culture, economy, and tourism motivation.

Sport dimension

The Zengibar Hiking Trail is known for its natural beauty and rich biodiversity. The trail stands out as an exciting destination for nature enthusiasts and sports lovers alike. It has been observed that engaging in outdoor sports provides a range of psychological benefits for individuals. These advantages include fostering teamwork and understanding group dynamics, developing leadership skills, building self-confidence, enhancing individual decision-making abilities, managing risks, taking on responsibility, positively affecting physiological development, increasing life satisfaction, inducing feelings of happiness, and promoting social interaction and socialization (Barut et al., 2019). The sports aspect of the Zengibar Hiking Trail is also noteworthy due to its varied difficulty levels and activity opportunities. The trail features different sections that cater to a wide range of users, from beginners to experienced athletes, emphasizing the unifying power of sports. Additionally, the natural terrain and topography of the Zengibar Hiking Trail offer athletes a variety of physical challenges, providing a stimulating environment for both fitness and adventure.

The Zengibar Hiking Trail, with its stunning landscapes and rich biodiversity, creates an ideal environment not only for hiking but also for photography and other outdoor sports. The trail is regularly maintained, and the markings ensure that athletes can follow the route safely. As a result, the Zengibar Hiking Trail offers a unique experience that combines sports and nature, providing visitors with unforgettable moments.

The sports aspect of the Zengibar Hiking Trail is enriched by recreational and sports facilities. Rest areas along the trail offer athletes the opportunity to take breaks when needed and enjoy the surrounding nature. These rest points allow hikers to plan their journey more effectively and move according to their needs. With its rich experiences, various activity opportunities, and environmental awareness, the Zengibar Hiking Trail attracts nature enthusiasts and sports lovers alike. The trail presents a perfect blend of sport and nature, appealing to hikers of all levels. The varying difficulty levels, recreational opportunities,

environmental sensitivity, and safe paths ensure an unforgettable experience for athletes, positioning the trail as an excellent destination for sports enthusiasts.

Environmental dimension

Nature and the environment have been an integral part of human life since the dawn of humanity. They are crucial not only for the balance of ecosystems and biodiversity but also for human health, well-being, and a sustainable future. The United Nations Conference on the Human Environment, held in Stockholm in 1972, and the subsequent focus on environmental issues, became a significant topic on the international agenda, forming the basis for the concept of sustainability (Çetinkaya, 2014: 31). Since that time, the sensitivity toward environmental issues has continued to grow in importance.

The Zengibar Hiking Trail also holds significant importance in terms of environmental awareness. The trail stands out as a natural route known for its unique ecosystems, stunning landscapes, and immense biological diversity. It offers visitors the opportunity to explore vegetation, endemic species, and various climate zones, all while adhering to the principles of sustainable tourism. Beyond providing an opportunity for physical activity, the Zengibar Hiking Trail serves as an activity that encourages exploration of rich ecosystems in harmony with nature, offering a chance to develop environmental sensitivity. By highlighting local biodiversity, the trail not only introduces visitors to endemic plant species and fauna but also allows nature hikers to gain knowledge about the region's ecosystems and move forward with an environmentally conscious mindset.

Cultural dimension

Culture, a universal value shaped by the historical, artistic, linguistic, and social heritage of societies, plays a crucial role in defining the identity of a community, transmitting its values, and strengthening social bonds by bringing individuals together (Oğuz, 2011: 132). Turkey, with its rich natural, historical, and socio-cultural characteristics, is an important destination for nature hiking activities. The country boasts numerous hiking trails across various regions (Çetinkaya, 2014: 31). One such trail, the Zengibar Hiking Route, stands out as a unique natural path offering a cultural experience. One of the significant sites along the route is the ancient city of Isauria, which hosts a rich history and cultural heritage spanning from the Hellenistic period to the Roman Empire. Hikers following the trail have the opportunity to engage with the region's historical past through the ancient ruins of Isauria, experiencing the influences of Roman architecture firsthand. The ancient city, with its temples, monumental structures, and ancient walls, reflects the historical importance of the region, enriching the cultural dimension of the route.

In addition to Isauria's historical heritage, the Zengibar Hiking Route is also integrated with local culture. The trail offers visitors the opportunity to explore local craft workshops, traditional markets, and regional festivals, allowing them to familiarize themselves with the daily lives and traditional practices of the local people. This cultural interaction not only fosters mutual understanding between tourists and locals but also serves the goal of preserving the region's cultural diversity and passing it on to future generations.

Economic dimension

The importance of the economy in daily life spans a broad spectrum, influencing everything from individual spending habits and business performance to the welfare of societies and global economic relations (Çanakcı, 2021: 12). In this context, both the economic contributions the route brings to the region and the economic benefits that the region's diversity can add to the trail are of great significance.

The Zengibar Hiking Route is not only a hiking trail offering breathtaking views to nature enthusiasts, but it also holds significant potential for making valuable contributions to the local economy. The economic aspect of the trail presents a range of opportunities in tourism, local services, and job creation. In this regard, sectors related to tourism, such as accommodation facilities, restaurants, souvenir vendors, and tour guides, will see an increase in business volume, bringing vitality to the local tourism industry. The development of services that cater to the needs of tourists will encourage local entrepreneurs to focus on new business opportunities. By attracting tourists' attention with local handicrafts, traditional products, and regional flavors, the trail can stimulate economic growth for local producers and vendors.

The maintenance of the hiking route, the provision of guiding services, and the hospitality and food sectors can create job opportunities, providing employment for local residents. This, in turn, helps further stimulate the economic development of the community. The economic dimension of the Zengibar Hiking Route plays a crucial role in revitalizing tourism-related sectors and fostering an increase in local economic activities, thus contributing to the promotion of sustainable development in the region's economy.

Conclusion

In this study, the hiking activity, as a form of ecotourism, has been aimed to be promoted through the Zengibar Trail. In this context, the first step involved conducting research relevant to the topic within a conceptual framework. In this section of the study, tourism and its subtypes are explained, and the relevant dimensions of the subject are examined. Following that, information supported by literature about the history and characteristics of the region is presented. After providing general information about the region, the features

of the trail are outlined in detail, supported by photographs of the route. In the final section of the study, an evaluation of the work across various disciplines and dimensions is provided.

The Zengibar Hiking Trail offers a visual feast of the natural beauties and cultural heritage, while also holding great potential in terms of ecotourism. This trail is considered a significant opportunity for regional tourism in the Bozkır-Hadim-Taşkent area. The ecotourism-focused nature of this study highlights the potential of the trail to contribute to the socio-economic development of the region. Through field studies, it is evident that the Zengibar Hiking Trail holds great importance in offering unique experiences and contributing to the conservation of the natural environment. Following the promotion of the Zengibar Hiking Trail, it is expected that an increase in visitor numbers will serve as a key resource for encouraging economic development in the region and improving the social welfare of the local community.

In conclusion, the effective integration of this ecotourism-focused trail into tourism represents a crucial step towards achieving the region's sustainable tourism goals. Furthermore, this study is expected to serve as a valuable reference, contributing significantly to the literature on sustainable tourism practices and strategies. In this way, it will provide a resource that can guide researchers in developing and managing sustainable tourism projects in similar regions, thereby enriching the knowledge base in this field.

References

- Akgül, M. (2023). Şanlıurfa'da turizmin geliştirilmesi bakımından doğa turizmi potansiyelinin değerlendirilmesi. Master's thesis, Sakarya: Sakarya University of Applied Science, Graduate Education Institute.
- Altun, S. (2016). Isaura Nekropolleri ve Mezar Tipleri. PhD thesis, Konya: Selçuk University, Institute of Social Sciences, Department of Archaeology.
- Arslan, A. (2014). Konya Çevresi Bizans Dönemi Mimarî Plastiği. PhD thesis, Eskişehir: Anadolu Institute of Social Sciences, Department of Art History.
- Ayhan, A. (2022). Karayip Topluluğuna Üye Ülkelerde Ekoturizm Faaliyetleri. Master's thesis. Konya: Necmettin Erbakan University, Institute of Social Sciences, Department of Ecotourism Guidance.
- Beşaltı, K. (2024). Erken Hristiyanlık Döneminde Adana ve Çevresi. *The Journal of Academic Social Science*, 126(126), 96-109.
- Bozdemir, E., Şengül, S. (2021). Kış Turizmi Üzerine Bir Literatür İncelemesi. *Journal of New Tourism Trends*, 2, (1), 35 – 74.
- Çam, B. (2024). Bir Serbest Zaman Aktivitesi Olarak Doğa Yürüyüşüne Katılan Bireylerin Rekreatif Spor İyi Oluşları İle Sosyalleşme İlişkilerinin İncelenmesi. Master's thesis, İstanbul Gelişim University, Institute of Postgraduate Education, Department of Sport Management.
- Çanakçı, M. (2021). Ekonomik Kalkınmada Toplumsal Refahın Önemi: Kamu Politikası Önerileri. *Anadolu Akademi Sosyal Bilimler Dergisi*, 3(1), 11-19.
- Çelik, M. (2007). İsauro Nekropolü. Master's thesis, Konya: Selçuk University, Institute of Social Sciences, Department of Archaeology.
- Çelik, S. (2018). Alternatif Turizm. *Uluslararası Sosyal Araştırmalar Dergisi*, 11 (56). 194- 204.
- Çetin, G. (2008). Dünya'da Golf Turizmi ve Türkiye'de Golf Turizmi Potansiyelinin Değerlendirilmesi. Master's thesis, İstanbul: İstanbul University Institute of Social Sciences, Department of Tourism Management.
- Çetinkaya, G. (2014). Doğa Yürüyüşü Parkurlarının Turizm Amaçlı Değerlendirilmesi: Antalya Beydağları Örneği. PhD thesis. Antalya: Akdeniz University Institute of Social Sciences, Department of Tourism and Hotel Management.
- Çimen, M., (2011). Lykaonia Bölgesi Süvari Betimlemeleri. Master's thesis, Konya: Selçuk University, Institute of Social Sciences, Department of Archaeology.
- Diker, O., Çetinkaya, A., Cinkara, A. (2016). Hava Sporları Turizmi Ve Safranbolu'nun Hava Sporları Potansiyelinin Belirlenmesi. *Karabük Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 6 (1). 85-100
- Diodoros Siculus. (1838). *Bibliothèque Historique*, XVIII,
- Doğanay, O. (2008). Isauria Bölgesi Kaya Mezarları ve Ölü Gömme Gelenekleri. PhD thesis. Konya: Selçuk University, Institute of Social Sciences, Department of Archaeology.
- Doğanay, O. (2016). Zengibar Kalesi (Isaura) 2010-2015 Yılları Yüzey Araştırmaları: İlk Sonuçlar ve Düşünceler. *İdil*, 5(21). 389-408.
- Doğanay, O., Kurt, M., Aydaş, M., & Eraslan, H. (2017). Zengibar Kalesi (Konya/Bozkır) 2016 Yüzey Araştırmaları. 35. *Araştırma Sonuçları Toplantısı*, Cilt II, 319-330. Bursa: 22 May 2017 / 26 May 2017
- Doğanay, O., Aydaş, M. (2024). Isaura Territoriumu'ndan Yeni Bir Yazıt. *Seleucia(XIV)*, 23-30.
- Durmuş, M. B., Demir, M. B., & Aras, E. (2007). (Çoruh Vadisi) İspir, Uzundere ve Yusufeli Bölgelerinde Yapılan Yeni Dağ Yürüyüşü Rotaları, *Doğu Anadolu Turizm Geliştirme Projesi Dağ Yürüyüşü Raporu*, 6-7, Erzurum.
- Erdoğan, H. A. (2019). Konya'daki arkeolojik kültür varlıklarının turizme kazandırılması. PhD thesis. Konya: Selçuk University, Institute of Social Sciences, Department of Archaeology.
- Erbay, M. (2024). Automation and Robotics of the Tourism Industry. In *Artificial Intelligence for Smart Technology in the Hospitality and Tourism Industry* (pp. 119-130). Apple Academic Press.
- Eren, D., Alaşhan, A. (2020). Nevşehir bölgesinin kongre turizmi potansiyelinin turizm işletme yöneticilerinin bakış açısıyla değerlendirilmesi. *Journal of Tourism Research Institute*, 1 (1), 15-33.
- French, D. H. (2014). *Roman Roads & Milestones of Asia Minor*, Cilt 3, Fascicul: 3,7. British Institute, Ankara.

- Kulak, P., (2024). Alternatif Turizm Rotalarının Oluşturulmasında Kültürel Miras: Koramaz Vadisi. Master's thesis. Konya: Konya Technical University, Institute of Postgraduate Education, Department of Architecture.
- Kurt M., (2018). Dağlık Kilikia ve Isauria'daki Kentleşme ve Sosyal Yaşam Üzerine Roma Kültürünün Etkileri. *History Studies*, 10(3), 13 -153.
- Kurt, M., Atcı, E. (2020). Yazıtlar Işığında Isauria Yerleşimi Astra'nın (Temaşalık) Politik ve Sosyo-Kültürel Durumu. *Selçuk Üniversitesi Edebiyat Fakültesi Dergisi*, (44), 405-422.
- Kurt, M., Karakuş, E. (2023). Geç Roma Cumhuriyeti Dönemi'nden Seçkin Bir Devlet Adamı: P. Servilius Vatia Isauricus. *Cedrus*, 11, 135-163.
- Özşaker, K. (2024). Rekreatyonel Amaçlı Doğa Yürüyüşünün Lise Öğrencilerinin Şiddet Yönetimleri Ve Benlik Saygılarına Etkisinin İncelenmesi. Master's thesis, Konya: Selçuk University, Institute of Health Sciences, Department of Recreation.
- Öztürk, Y., Yazıcıoğlu, İ. (2002). Gelişmekte Olan Ülkeler İçin Alternatif Turizm Faaliyetleri Üzerine Teorik Bir Çalışma. *Ticaret ve Turizm Eğitim Fakültesi Dergisi*, 2, 183-195.
- Pilhofer, P. (2018) Das frühe Christentum im kilikisch-isaurischen Bergland: Die Christen der Kalykadnos-Region in den ersten fünf Jahrhunderten. *Texte und Untersuchungen zur Geschichte der altchristlichen Literatur* 184. Berlin: de Gruyter.
- Sezer, İ. (2012). Turistik fonksiyonları ve yat turizmine etkileri açısından Didim yat limanı (d-marin Didim). *Doğu Coğrafya Dergisi*, 28. 103-124.
- Strabon, (2000) *Geographika-Antik Anadolu Coğrafyası* (Kitap XII-XIII-XIV), (çev. A. Pekman), İstanbul: Arkeoloji ve Sanat Yayinevi.
- Şafak, İ. (2003). Türkiye'Deki Av Turizmi Uygulamalarının Özel Avlak İşletmelerine Etkileri. *Süleyman Demirel Üniversitesi Orman Fakültesi Dergisi*, A (2). 133-148.
- Şahin, H. (2022). Kastamonu doğal mirasının turizm potansiyeli ve sürdürülebilir doğa turizmi için bir yol haritası. Master's thesis, Kastamonu: Kastamonu University, Institute of Social Sciences, Department of Tourism Management.
- Tekin, Ö. (2017). Ekoturizm açısından Konya ili doğa yürüyüşü rotaları üzerine bir araştırma. *MANAS Sosyal Araştırmalar Dergisi*, 6 (3). 378-400.
- Uluslan, Y., ve Batman, O. (2010). Alternatif Turizm Çeşitlerinin Konya Turizmine Etkisi Üzerine Bir Araştırma. *Selçuk Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, (23). 244-260.
- Yaşar, O. (2011). Saros Körfezi Kıyılarında Su Altı Dalış Turizmi. *Journal Of World of Turks*, 3 (1). 33-55.
- Yıldız, S. (2024). Rekreatyonel Spor İyi Oluş İle Depresyon İlişkisi: Doğa Yürüyüşüne Katılan Bireyler Üzerine Bir Araştırma, Master's thesis, İstanbul: İstanbul Gelişim University, Institute of Postgraduate Education, Department of Sport Management.

LIVING KITCHEN TRENDS

Umutcan Yeşilyurt¹

INTRODUCTION

Gastronomy is considered not only as the act of eating and drinking but also as a social, cultural, and economic phenomenon. Today, gastronomy makes significant contributions to tourism, particularly in terms of protecting local cultures, supporting sustainable agriculture, and ensuring sustainable production. Culinary movements have emerged throughout human history in response to social, cultural, technological changes, and even other movements. Adapting to these changes is crucial for businesses to maintain their operations and gain a competitive advantage. One such trend, the Living Kitchen movement, offers tourists an unforgettable experience. Guests who participate in Living Kitchen practices are more actively involved in the dining experience, allowing them to learn about the food culture, history, customs, and traditions of the region they are visiting. These practices offer solutions to problems caused by the all-inclusive system, such as guests not wanting to leave the hotel, not recognizing the local culture, or misperceptions. Simultaneously, these practices contribute significantly to the local economy, sustainability, provide an unforgettable experience, and help preserve culture. The main goal of Living Kitchen practices is to provide experiences that stimulate the five senses (sight, hearing, taste, touch, and smell) through food (Bölük, 2020).

“Living cuisine” has attracted significant attention in recent years as an important movement driving the development of gastronomy tourism and culinary culture. This trend allows tourists to discover the culinary culture of the region. Accommodation establishments offer their guests a gastronomic experience that they would rarely encounter through unique and contemporary services. Aiming to meet the demands of consumers seeking innovation in food and beverages, contemporary chefs create new flavors and presentations by blending traditional recipes with modern techniques (Yıldırım Saçılık, 2020).

This trend not only offers exceptional flavors but also aims to create an unforgettable gastronomic and cultural experience by giving visitors the opportunity to engage with the culture of the region (Bölük, 2020). Living cuisine is shaped by elements such as the use of local and seasonal ingredients, sustainability principles, and the protection of gastronomic heritage. In this context, hotels and restaurants are encouraged to offer both taste and cultural

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diversity by incorporating local recipes and products into their menus. The use of local products positively influences tourist experiences and strengthens the link between flavors and cultural context (Şengül & Türkay, 2016).

The innovative approaches of modern chefs, the reinterpretation of traditional recipes, and the blending of these recipes with contemporary culinary techniques are ushering in a new era in the world of gastronomy. At the same time, the concept of “Living Cuisine” is of great importance in supporting local economies and preserving gastronomic heritage for future generations. Therefore, the Living Cuisine movement has a significant impact on gastronomy tourism, as well as sustainable food production and consumption (Çetinkaya & Bucak, 2024).

Living Kitchen practices are shaped by values such as the use of local ingredients, sustainability, and the protection of gastronomic heritage. Visitors are offered the opportunity to discover the gastronomic identity of the region through culinary workshops and traditional cooking experiences. Additionally, the use of local and seasonal products supports the local economy and reduces environmental impacts. Living Cuisine offers an unforgettable experience by combining gastronomy tourism, the preservation of cultural heritage, and the promotion of sustainability.

The aim of this study is to examine how the Living Cuisine Movement has evolved food culture beyond being merely a source of nutrition and into a tool for social interaction, cultural experience, and education. It also aims to explore the impact of this movement on preserving local cultures, ensuring environmental sustainability, supporting local economies, and increasing tourists’ loyalty to the region. The study seeks to evaluate the opportunities presented by Living Cuisine practices in terms of gastronomy tourism and cultural interaction, and plans to provide suggestions on how to expand the reach of this movement to broader audiences. This study will closely examine the significance of Living Cuisine practices concerning local, cultural, and sustainability aspects, as well as their contributions to guests participating in tourism activities.

Living Kitchen Practices

The main feature of the apps is to involve guests more actively in the dining experience, to offer special and individualized service, as well as to allow them to taste delicacies that reflect the culture, history and geography of the accommodation.

A day with the Chef App

It is a practice to encourage hotel guests to discover the rich culture of the region. By taking tourists to local markets, food production factories and agricultural areas, it aims to introduce the local people and local food. In this

special experience, tourists not only taste the flavours, but also learn about the local people and cuisine. In addition, it helps to change the system, which is usually only profitable for the hotel in all-inclusive hotels, and helps to generate income for the local community (Bölük & Küçükaltan, 2019, p. 648). In some applications, tourists only cook a meal specific to that region with the chef, while in other applications, they shop from local markets on guided trips and these products are then prepared to be served with the guests. These carefully selected products are combined with the traditional visuals of the region and presented to the guests (Erdem & Akyürek, 2017).

To concretize it with an example story; One day during his vacation in Samsun, a tourist wants to participate in the kitchen practice at the hotel where he is staying. The chef of the hotel offers to make Bafra pita, the most famous dish of Samsun. The chef goes with the tourist to the butcher shop and the local market to buy the necessary ingredients to make this dish, giving tips on how to buy the necessary ingredients and buying the necessary ingredients. After buying the products, they go to the hotel kitchen together. Together with the chef, he explains and demonstrates how to make the most suitable dough for Bafra pita bread. The dough is left to ferment. While the dough is fermenting, the chef and the tourist prepare the filling together and at the same time they chat about culture and food. After the dough has fermented, the chef shows how to roll out and shape the dough. Following the chef's advice, the tourist rolls out the dough and puts the filling. He folds the dough around the edges and shapes it into pita bread. Spreads egg yolk on the pita. He puts the pita in the oven. The tourist chats with the chef while waiting for the pita to be cooked. The chef gives him information about the food culture, history and geography of Samsun. This helps the tourist to get to know Samsun more closely. After the pita is cooked, the tourist and the chef take the pita out of the oven and serve it with plenty of butter. The tourist tastes and comments on the pita. The tourist will have an unforgettable experience of this practice with the chef. Thanks to this unique experience, guests are made to feel part of the regional cuisine. Guests who participate in such an experience will promote this experience when they return to their country and contribute to raising the image of the country, new touristic activities and the promotion of culture.

Live Streaming App

The app is based on the experience of cooking simultaneously through a video communication network between guests and the chef. This special application aims to give guests the thrill of participating in the live cooking process and offer them a different experience. Guests purchase a pre-prepared recipe and ingredient basket, and when their reservation time arrives, they experience cooking in their room with the chef via the hotel's information channel. They

follow the recipe step by step with the chef's instructions. Thanks to video communication, the chef can make suggestions as guests chop ingredients, shake the pan and add fresh spices, making the experience more enjoyable. With this unique application, hospitality businesses can generate additional revenue while at the same time offering their guests an interactive and enjoyable interaction. Designed to increase guest satisfaction, this method enriches the accommodation experience not only as a stay but also as a memorable dining experience (Dönmez Özel & Dursun Küçükoğlu, 2022).

Cooking with Kids App

Living kitchen applications include fun and educational kitchen activities for child guests staying at the hotel. These activities aim to teach children a range of important skills. The pureeing of vegetables and fruits into various colored sauces allows children to develop their senses and experiment with different tastes. These activities also give children a sense of accomplishment, encourage them to share, increase their ability to take responsibility and develop their ability to establish cause-and-effect relationships (Bölük & Küçükaltan, 2019). While children enjoy creating their own meals, they develop patience by waiting for the result of the work. These activities, especially with children's club staff and chefs, also contribute to the development of the imagination of child guests. Children have the freedom to draw anything they can imagine on their plates and even get the chance to taste it. This practice frees children's creativity while providing a pleasant and instructive experience (Akman, Karaaslan, Çelebi Öncü, & Karaböcüoğlu, 2005).

Kitchen Cooking Competitions (Chefs Compete)

It aims for guests to enjoy their free time and have a special dining experience. In this event, chefs working at the hotel compete against each other to prepare special dishes for guests. The app includes predetermined scoring categories and guests are informed about the categories. The cooks put on a live performance and show their skills and culinary prowess to the guests. Guests evaluate and rate the cooks during the competition they are watching. During the competition, the cooks present their creativity, technical skills and culinary experience to the guests, creating a special culinary feast. Scoring categories usually include elements such as flavor, presentation, speed and creativity (Özel, 2022, p. 51). With this interactive cooking competition, guests not only experience a delicious meal, but also the opportunity to get to know the talents of the chefs up close and have a special interaction.

Food Festivals

Festivals are events that are not limited to entertainment and celebrations, but also provide opportunities for the local community and visitors to spend and participate in various local activities. These events contribute positively to

the local economy by giving participants the chance to discover and experience regional culture. In addition, festivals contribute to strengthening the regional image and provide a platform to promote the characteristics of that region (Keskin & Sezen, 2022).

There is also a practice that includes various small food festivals that take place within the hotel concept. These festivals aim to provide guests with different presentations and experiences (Erdem & Akyürek, 2017). These festivals, each organized around a specific theme or concept, emphasize gastronomic diversity and offer guests an unforgettable culinary experience. The app can give guests the opportunity to attend various food festivals during their stay at the hotel. At each festival, specially selected chefs or kitchen staff represent a specific culinary culture, regional flavors or a special style of food. Through these festivals, guests gain a variety of culinary experiences and are allowed to discover gastronomic richness. Special presentations at festivals can include a variety of dishes, as well as impressive visual shows and interactive activities. With these events, guests will have the opportunity to immerse themselves in the cuisines of different cultures.

Organizing local events in certain periods has the potential to offer more profitable experiences for hotel businesses, intriguing for customers and educational for employees. This can mean increased revenue for the hotel, experience for customers and an educational activity for employees (Demirtaş & Akkuş, 2020).

Local Activities

Living cuisine refers to a culinary style that uses local resources, cultural richness and the natural environment to create sustainable and unique flavors. Local events are important activities that aim to improve the quality of life today by emphasizing geographical features and historical depth. These activities include providing guests with local wedding-themed organizations and impressive events where local delicacies prepared with traditional methods are shown (Özel, 2022).

Breakfast in the Garden

The app aims to enable businesses to offer guests a unique breakfast experience using produce from their own gardens. For example, guests can pluck fresh tomatoes from the branches and have the chance to make menemen with chefs on site. There is also a practice that allows guests to crack and cook their own fresh eggs from the coop in pre-heated casseroles. This allows guests to customize their own breakfast, prepared with natural and organic ingredients. Pick-your-own sales, one of the agrotourism activities, can also be seen in this context (Zurnacı, 2012). There are also practices in this format in our country. For example, guests visiting a strawberry field can pick strawberries themselves

and buy them. It is an educational experience for children to experience how the product grows, to be able to choose the product and to experience how the product is grown. In addition, it contributes to the economy of the local people and provides visitors with the opportunity to obtain other products made from strawberries (*jam, molasses, etc.*) in a natural way.

Fun Gastronomy Pack

Guests will start the day with a treatment made with the prominent fruits or vegetables of their region. As part of this special package, guests will have an unforgettable breakfast or lunch experience under the guidance of the chef. Then, guests are guided to the field where the region's famous fruits or vegetables are grown, and have the opportunity to taste the products in the field and fill their baskets. On the way back, a Cooking Class event is organized in the establishment under the guidance of a chef and guests experience the experience of preparing delicious dishes with their own hands (Dönmez Özel & Dursun Küçüköğlü, 2022).

Cultivate and take away

The hotel offers a special application that stands out with fresh spice pots placed in the rooms of guests with children. In this context, children can take the fresh spices in their rooms with them when they leave the hotel. This practice allows child guests to develop a sense of responsibility and contribute to feelings of love and ownership. At the same time, children have their own they can take the spices they have grown home with them, allowing them to take the experience home with them. In this way, children can feel proud of themselves and build a strong bond with the hotel, increasing their loyalty to the business. The likelihood of repeat visits increases and makes a positive contribution to the hotel (Dönmez Özel, 2021).

Gastronomic Tours

The app aims to take guests out of the confines of the traditional all-inclusive concept and encourage them to explore the local flavours and culture of the region. Guests are exposed to different experiences by visiting local food and beverage factories, agricultural areas and other points of interest in the region on short tours. For example, olive oil mills, local markets, strawberry fields and tangerine orchards in the Bodrum region can and do fall within the scope of these tours. During these visits, guests can purchase olive oil, strawberries, tangerines and other local products that they buy or pick themselves for use in the hotel. In addition, guests can prepare local dishes with the hotel's chefs using the products they have picked with their own hands. This not only contributes to the local economy but also provides guests with an unforgettable local cuisine experience (Erdem & Akyürek, 2017; Özel, 2022).

Living Kitchen New Apps

Examples of newer applications compared to other applications include the fisherman concept, paint taste application, square sinisi, meze festival (URL 1).

Fisherman Concept

In this presentation, different cooking techniques are applied using local fish varieties, seasonal products and natural spices. The aim of the presentation is to introduce fish culture and flavours, to give guests tips on cooking and serving fish, and to turn eating fish into a fun experience. At the same time, it becomes more fun by organizing the event with fishing clothes and music.

Paint Taste

In this presentation, guests prepare their own dishes by coloring and flavouring them. The ingredients for coloring and flavoring are natural and healthy products. The aim of the presentation is to show guests a fun and creative side of cooking, to experiment with different color and taste combinations and to enrich their food culture. People of all ages participate in this practice.

Square Sinisi

In this special presentation, our guests gather around a table with a magnificent combination of local flavours and share this feast together. The main purpose of the presentation is not only to serve a delicious meal to the guests, but also to experience the local culture and traditions, to strengthen the sense of sharing and solidarity and to further enrich the food culture.

Meze Festival

Meze Festival is an international gastronomy event organized by Akra Hotels. Guests are offered a selection of appetizers from Turkish and international cuisine from different venues participating in this festival. The main goal of the festival is to bring food lovers together by introducing the meze culture and various flavors, offering a unique gastronomic experience that creates a harmony on the palate. The fifth edition of this event, which has been organized four times, was cancelled this year due to the mourning declared in our country (URL 2).

Characteristics and Contributions of Living Kitchen Practices

Living cuisine practices are a branch of tourism and gastronomy activity used to preserve, promote and develop local and traditional food cultures. Some of the practices and features for this activity to be carried out are mentioned below. These are;

Authenticity

Authenticity in living cuisines is an important element for both tourists and local communities. Authenticity is a quality that is usually defined as real,

original, natural, traditional and pure (Wang, 1999). Authenticity has 3 different main dimensions in the context of tourism and gastronomy. If we look at these dimensions;

Objective Authenticity

It is a dimension that explains the appropriateness of dishes, ingredients (products), recipes, cooking methods, cooking stages and presentations to local and traditional culture. This dimension focuses on the physical and historical reality of food (Cohen, 1988; MacCannell, 1973).

Subjective Authenticity

It refers to tourists' sense of connection with local culture, self-expression, self-improvement and meaningful experiences through tasting and learning about food. This dimension focuses on the appeal of food to tourists' psychological and emotional needs (Wang, 1999; Kim, Eves, & Scarles, 2009).

Existential (Existential) Authenticity

It refers to the sense of identity, pride, belonging, participation and well-being of local communities through the preservation, promotion and development of their food culture. This dimension focuses on the contribution of food to the social and cultural values of local communities (Everett & Aitchison, 2008). Ensuring authenticity in living kitchens increases the satisfaction and loyalty of both tourists and local communities and strengthens the relationship between tourism and gastronomy. In order to achieve this;

- Local and traditional recipes need to be passed on to future generations, and cooking methods and presentations need to be preserved and promoted,
- Encourage the use of local products sourced from local producers,
- Visitors need to be provided with accurate information about local cuisine. It should also be supported with workshops and experience tours.
- Local communities should take an active role in preserving, promoting and developing their food culture,
- While preserving traditional methods, modern technologies and methods should also be integrated to ensure that people's lives are made easier with the benefit of technology while keeping tradition and culture alive (Özdemir & Dülger Altner, 2019).

Education

Education is a continuous field that is constantly evolving (Akyürek, 2020). In the educational process, it usually refers to the exchange of information between the instructor and the students, but it is not only the transfer of

information, but also the acquisition of skills, the teaching of values, and the development of social and emotional skills (Ergün, 1994).

As visitors interact with the local cuisine, the principle of learning by doing is realized. With this principle, visitors have the opportunity to taste, learn and experience food culture. It allows individuals to discover their talents and also allows children at a young age to discover their talents. It can contribute to the development of interests and skills by participating in activities. In addition, it increases visitors' gastronomic satisfaction, cultural understanding, destination loyalty and intention to visit again. Living cuisine education helps to support local producers, communities and the economy (Erdem & Akyürek, *A New Culinary Movement: Living Cuisines (A New Cuisine Trend: Living Cuisines)*, 2017).

Experience

Experience is a concept that is based on individuals' personal perceptions and includes activities that take place in various areas of their daily lives. It is the way individuals express the events they experience, their emotional reactions and subjective inferences. Experience is not only limited to routine daily life; it is also associated with different activities, events and events in which the individual participates (Çulha, 2020). This comprehensive concept enables individuals to have a broad perspective and shape their learning through various life experiences (Otto & Ritchie, 1996). Which types of tourism tourists are more interested in is thought to have a key role in determining the experiences they prefer (Cetin & Bilgihan, 2016).

For these reasons, the experience is important for the quality of time spent, repeat visits and image. A memorable tourism experience consists of 4 factors: emotion, expectation, consequential impact and recall. They determine the way tourists evaluate their experience, form an emotional connection, are affected and remember it for a long time. That is, tourists' experiences are not only limited to the immediate emotional interaction, but also have an impact on their expectations, experience outcomes and long-term recall (Tung & Ritchie, 2011). Experience is an important factor in creating a loyal customer base by increasing tourists' desire to revisit the destination (Kahraman & Tanrıverdi, 2021).

Sustainability

In terms of meaning, the word sustain means to continue naturally without any impact, while sustaining means to ensure continuity consciously (Kaypak, 2010, p. 98). Sustainability is the capacity of a situation or system to continue its existence in the long term by avoiding overuse of resources and transferring them to future generations without harming resources (Gedik, 2020, p. 197).

It is an important term that contributes to the continuity of the tourism and gastronomy sector, protecting local culture, discovering new flavors and supporting continuity with various gastronomic activities (Akdağ, Özata, Sormaz, & Çetinsöz, 2016, p. 271).

The concept of sustainability is gaining importance day by day due to reasons such as the rapid increase in the world population, high waste emissions, and the increase in gases from industry and automobiles. Sustainability is a concept that includes the use of resources sufficient for future generations and environmental protection. This understanding also includes maintaining and transmitting cultural values and traditions. It is a multifaceted issue addressed in various fields of science (Yavuz, 2010). When we look at its relationship with the living kitchen, it encourages the supply of local ingredients from local producers. In this way, in addition to encouraging local producers, it keeps the local economy alive and enables sustainable tourism.

Culture

Culture refers to the whole of the elements (*language, religion, music, architecture, tradition, art, etc.*) that distinguish human communities from other communities that express the common symbols system and way of life (Oğuz, 2011; Kocadaş, 2005; Arslanoğlu, 2000).

Culture is one of the most important factors affecting tourism activities. When an individual who will participate in a tourism activity makes a choice, he/she thinks and even plans in advance what he/she will eat in the region where he/she will go. For this reason, culture is very important for tourism and living cuisine practices has. It also encourages the preservation of handmade products, promoting the goal of preserving cultural heritage and traditions.

Recreation

It refers to the activities that people carry out in order to spend their free time (leisure time) in a qualified way (Karakan, 2021). Many countries around the world have recognized this economic potential and have made gastronomy-themed recreational activities an important part of their tourism strategies. Such activities stand out not only in terms of attracting tourists, but also with their contribution to local economies and cultural heritage (Gökdeniz, Erdem, Dinç, & Çelik Uğuz, 2015). Gastronomy-themed recreational activities increase travel motivation by offering tourists not only a delicious dining experience but also the opportunity to explore the cultural richness of a destination. These activities are tourism innovative and attractive dimension in the industry.

Contribution to Local Economy

Living cuisine is a tourism model that contributes positively to the regional economy by emphasizing local agricultural products and handicrafts. Tourists

leave their all-inclusive hotels and enter the local community and thus make a great contribution to revitalizing the local economy. When tourists leave their hotels, they interact with local people in many areas. For example, it can contribute to the revival of the economy in areas such as public transportation, markets, souvenirs, textiles.

CONCLUSIONS AND RECOMMENDATIONS

Eating and drinking, which was seen only as a physiological need in the early ages, covers an area that includes interaction with cultures, experience and emotions with social, cultural and economic changes. These developments have led to the diversification of culinary cultures and the emergence of gastronomy tourism. Gastronomy and gastronomy tourism refers to a field that appeals to all senses beyond the eating and drinking experience. Today, gastronomy tourism has gained importance and has become a travel motivation. Businesses need to adapt to changes in order to sustain their activities and gain competitive advantage. Developments have led to changes in food processing, presentation and service methods, and with these changes, consumers are turning towards natural, local and experiential activities. It plays an important role in the promotion of local cultures and the preference of destinations. Gastronomy tourism, which is important for the protection and sustainability of local cuisines, is important for supporting local producers, transferring traditional products and recipes to future generations and keeping local products alive. Culinary movements emerge in response to or in support of developments and other movements. As mentioned in the literature, *haute* cuisine emerged to provide careful selection of ingredients, cooking techniques, aesthetic presentation and rich flavor. Later on, the *nouvelle cuisine* movement emerged as a shorter menu and freshness-oriented cuisine in response to classical cuisine. The fast food trend, on the other hand, has led to the emergence of the habit of eating out with technological developments. In response to this trend, the *Slow Food* movement has emerged. The slow food movement advocates the consumption of products grown in local regions and grown with traditional methods and cooked products without rushing and savoring them. In addition to these movements, the *avant-garde cuisine* movement has led to the emergence of fusion cuisine and molecular gastronomy. Today, there are many trends depending on the developments. For example, Raw Food, Surf&Turf, Entomophagy (Edible Insects), Green generation restaurants, agro tourism, black food, purple food, etc.

The Living Cuisine Movement refers to an approach that sees food culture not only as nutrition, but also as a means of social interaction and cultural experience. The Living Cuisine Movement brings solutions to the problems of all-inclusive hotel systems such as not being able to experience the culture

of the region, not leaving the hotel, not learning the traditions, customs and traditions of the region. Thanks to the living kitchen movement, guests not only taste the food, but also have the opportunity to experience the local culture, local markets, traditions and local cooking techniques of the region. Some of the practices include a day with the chef, live broadcasting, cooking with children, cooking competitions, breakfast in the garden, grow-and-take, paint-and-taste, and square sinis, which appeal to guests' different senses and create a special connection with the culture. With these practices, guests get to know the region better, establish a special bond with the region and positively affect their intention to visit again.

The living kitchen movement provides important contributions in many areas such as sustainability, contribution to the local economy, experience, culture and education. In terms of sustainability, the application contributes to the preservation and transfer of local food culture to future generations. In terms of contribution to the local economy, it protects natural products and supports local producers as it cooperates with local producers. In terms of experience and culture, the practices allow guests to get to know the food culture, traditions and local markets of the region. In terms of education, it contributes to the development of guests' imagination and learning new dishes. In this way, guests can form a special bond with local cultures, which can lead to repeat visits and new guests by passing on the experience to others.

In order to increase the awareness of the living kitchen movement, social media platforms should be utilized more and the number of academic articles should be increased. Collaboration with schools, businesses and chefs can contribute to increased awareness, diversification of practices and the emergence of new practice kitchens. Supporting the trend with the adoption of living kitchen practices by chefs and restaurants, promotions and workshops to be organized at schools and universities can make important contributions.

REFERENCES

- Akdağ, G., Özata, E., Sormaz, Ü., & Çetinsöz, B. C. (2016). Sürdürülebilir Gastronomi Turizmi İçin Yeni Bir Alternatif: Surf&Turf. *Journal of Tourism and Gastronomy Studies*, 270-281.
- Akman, B., Karaaslan, T., Çelebi Öncü, E., & Karaböcüoğlu, M. (2005). *Çocuklarla Mutfakta Eğlence*. İstanbul: Epsilon Yayınları.
- Akyürek, M. İ. (2020). Uzaktan Eğitim: Bir Alanyazın Taraması . *Medeniyet Eğitim Araştırmaları Dergisi*, 1-9.
- Arslanoğlu, İ. (2000). Kültür ve Medeniyet Kavramları. *Gazi Üniversitesi Hacı Bektaş Veli Araştırma Dergisi*, 243-255.
- Bölük, H. (2020). *Şerbetli Kitap: Türk Dünyasında Yaşayan Mutfak*. Antalya: Likya Kitap.
- Bölük, H., & Küçükaltan, D. (2019). Gastronomide Yaşayan Mutfak Kavramı ve Uygulama Örnekleri. *4. Uluslararası Gastronomi Turizmi Araştırmaları Kongresi* (s. 647-450). Nevşehir: Nevşehir Hacı Bayram Veli Üniversitesi Turizm Fakültesi.
- Cetin, G., & Bilgihan, A. (2016). Components of cultural tourists' experiences in destinations . *Current Issues in Tourism*, 137-154.
- Cohen, E. (1988). Authenticity and Commoditization in Tourism. *Annals of Tourism Research*, 371-386.
- Çetinkaya, A. D., & Bucak, T. (2024). Sürdürülebilir Gastronomi Turizmi Kapsamında Yaşayan Mutfak Uygulamalarının Rolü Üzerine Bir Çalışma: Şef Ebru Baybara Demir Örneği. *8. Uluslararası Gastronomi Turizmi Araştırmaları Kongresi* (s. 823-838). Aydın: UGTAK.
- Çulha, O. (2020). Turizmde Deneyim Ekonomisi Uygulamaları. *Alanya Akademik Bakış Dergisi*, 495-519.
- Demirtaş, Ü., & Akkuş, G. (2020). Otel İşletmelerinde Yöresel Mutfak Etkinlikleri: Durum Analizi. *Uluslararası Global Turizm Araştırmaları Dergisi*, 46-63.
- Dönmez Özel, B., & Dursun Küçüköğlü, M. (2022). Kapadokya'yı Ziyaret Eden Turistlerin Yaşayan Mutfak Deneyimleri Üzerine Bir Araştırma** (A Research on Living Kitchen Experiences of Tourists Visiting Cappadocia). *Journal of Tourism and Gastronomy Studies*, 2665-2688.
- Erdem, B., & Akyürek, S. (2017). Yeni Bir Mutfak Akımı: Yaşayan Mutfaklar (A New Cuisine Trend: Living Cuisines). *Journal of Tourism and Gastronomy Studies*, 103-126.
- Erdem B, Akyürek S, Bölük H (2018) Livingcuisines As An Example Of New Practice in Hotel Cuisines. İn: Rusev M, Straus E, Avcıkurt C, Soykan A, Parlak B (Eds.). *Social Sciences Researches in Theglobalizing World*. s.398-407. (Sofia: St. Klimentohridski University Press).
- Everett, S., & Aitchison, C. (2008). The Role of Food Tourism in Sustaining Regional Identity: A Case Study of Cornwall, South West England. *Journal of Sustainable Tourism*, 150-167.
- Gedik, Y. (2020). Sosyal, Ekonomik, Çevresel Boyutlarla Sürdürülebilirlik ve Sürdürülebilir Kalkınma. *International Journal of Economics, Politics, Humanities & Social Sciences* , 196-215.
- Gökdeniz, A., Erdem , B., Dinç, Y., & Çelik Uğuz, S. (2015). Gastronomi Turizmi: Ayvalık'ta Yerli Turistler Üzerinde Görgül Bir Araştırma* (Gastronomy Tourism: An Empirical Study on Domestic Tourists in Ayvalık). *Journal of Tourism and Gastronomy Studies*, 14-29.
- Kahraman, O. C., & Tanrıverdi, H. (2021). Unutulmaz Turizm Deneyimi ve Tekrar Ziyaret Etme Niyeti Arasındaki İlişki. *Anatolia: Turizm Araştırmaları Dergisi*, 43-54.
- Karakan, H. İ. (2021). Gastronomi Temalı Rekreasyon Etkinlikleri. S. Kül Avan , E. K. Şimşek, Ö. Yayla , & M. C. Birinci içinde, *Rekreasyon ve Turizm Araştırmaları* (s. 41-52). İstanbul : Çizgi Kitabevi.
- Kaypak, Ş. (2010). Ekolojik Turizmin Sürdürülebilirliği. *Alanya İşletme Fakültesi Dergisi*, 2(2), 93-114.
- Keskin, E., & Sezen, N. (2022). Gastronomi Festivalleri, Yemek İmajı ve Destinasyon İmajı Arasındaki İlişkiler: Hatay Örneği (Relationships Among Gastronomy Festivals, Food Image and Destination Image a Case Study of Hatay). *Journal of Tourism and Gastronomy Studies*, 856-881.
- Kocadaş, B. (2005). Kültür ve medya. *Bilgi*, 1-13.
- Oğuz, E. S. (2011). Toplum Bilimlerinde Kültür Kavramı. *Edebiyat Fakültesi Dergisi*, 123-139.
- Otto, J. E., & Ritchie, J. (1996). The service experience in tourism. *Tourism Management*, 165-174.

- Özdemir, G., & Dülger Altınar, D. (2019). Gastronomi Kavramı ve Gastronomi Turizmi Üzerine Bir İnceleme. *Erzincan Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 1-14.
- Özel, B. D. (2022). *Kapadokya'yı Ziyaret Eden Turistlerin Yaşayan Mutfak Deneyimleri Üzerine Bir Araştırma*. Nevşehir: T.C. Nevşehir Hacı Bektaş Veli Üniversitesi Sosyal Bilimler Enstitüsü Gastronomi ve Mutfak Sanatları Ana Bilim Dalı (Yüksek Lisans Tezi).
- Şengül, S., & Türkay , O. (2016). Yöresel Mutfak Unsurlarının Turizm Destinasyonu Seçimindeki Rolü (Mudurnu Örneği). *Uluslararası Yönetim İktisat ve İşletme Dergisi*, 63-87.
- Tung, V. W., & Ritchie, J. (2011). Exploring the essence of memorable tourism experiences. *Annals of Tourism Research*, 1367-1386.
- Wang, N. (1999). Rethinking Authenticity in Tourism Experience. *Annals of Tourism Research*, 349-370.
- Yavuz, V. (2010). Sürdürülebilirlik Kavramı ve İşletmeler Açısından Sürdürülebilir Üretim Stratejileri. *Mustafa Kemal Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 63-86.
- Zurnacı, N. (2012). Kırsal Turizmde; Girişimcilik ve Örgütlenme. *KMÜ Sosyal ve Ekonomik Araştırmalar Dergisi*, 65-70.

URL 1: <https://yasayanmutfak.com.tr/#> (E.T.: 07.06.2024).

URL 2: <https://mezefestivali.com/tr/> (E.T.: 12.06.2024).

THE EFFECTS OF SOCIAL MEDIA AND TV PROGRAMS ON GASTRONOMY TOURISM

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Introduction

Beyond meeting a basic physiological need, the act of eating and drinking should also be considered as a socio-cultural phenomenon. In an ever-changing and evolving world, eating and drinking activities assume multifaceted functions such as socialization, aesthetic experience and leisure. These activities provide both physical and psychological satisfaction by activating the five senses of the individual. Gastronomy is a dynamic concept that has undergone continuous transformation throughout human history and will continue to change in the future. With changing living conditions, increasing welfare levels, the spread of tourism and the increasing importance of social life, eating and drinking habits have also undergone a significant transformation. Today, people personalize their eating and drinking experiences and seek different tastes and experiences. This situation reveals once again that gastronomy is not a static concept, but a constantly changing and developing phenomenon (Genç, 2021)

The act of eating and drinking has existed throughout human history not only as a physiological need but also as a social and cultural phenomenon. Nutrition culture has played an important role in shaping social identities and socialization processes by being passed down from generation to generation. Practices such as food preparation, presentation and consumption have been shaped by social norms and values. With the advent of the digital age, social media platforms, especially Instagram, have played an active role in the spread and transformation of food and beverage culture. By sharing food photos on social media, users are encouraged to discover new flavors and thus contribute to the formation of a global gastronomy culture. This situation affects individuals' food and beverage preferences and becomes a determining factor in the selection of tourist destinations. Television programs and movies also shape tourism demand by strengthening the image of destinations. The study aims to examine how social media and television programs, which are increasingly important in the tourism sector today, affect people's travel decisions and their impact on a popular destination such as Antalya, especially in the context of gastronomy tourism. This study provides a scientific approach to the management processes

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of the tourism sector by examining the interaction of social media and television on tourism in depth perspective on tourism marketing strategies. It will both contribute to the body of knowledge by providing new theoretical and empirical findings to the academic literature and provide practical suggestions to industry professionals and policy makers to help them make data-driven decisions on the development of tourism marketing strategies. The aim of this study is to examine the effects of social media on eating and drinking habits and cultural perceptions and to reveal the role of these platforms in shaping gastronomy trends. In this context, the study will fill an important gap at the intersection of tourism, marketing, communication and social media disciplines and will be a valuable resource for all relevant stakeholders.

Gastronomy

Gastronomy, derived from the Greek words “gaster” (stomach) and “nomas” (law), is an interdisciplinary field that covers all the scientific and artistic rules applied in the process from production to consumption of food (Baysal and Küçükaslan 2007:6). The definition made by Ozkok (2017:183) emphasizes that gastronomy is not only the art of preparing and serving delicious food, but also a much broader field that covers the cultural, social and scientific dimensions of food. Gastronomy has gone beyond the basic need for nutrition and has become a complex phenomenon that affects many different aspects of human life. This discipline has been developed with the aim of preparing food under hygienic conditions, aesthetic presentation and providing a delicious experience. Gastronomy is generally examined in three basic dimensions: production, consumption and production-consumption interaction. The production dimension covers the scientific and artistic aspects of the food preparation process. The consumption dimension examines individuals’ eating behaviors, taste perception and attitudes towards food. In the dimension where production and consumption are handled together, the methods and tools used in the whole process from the production of food to its presentation are examined. According to Akgöl (2012), gastronomy can also be classified under four main headings: applied, theoretical, technical and scientific. Applied gastronomy examines the preparation and presentation of dishes; theoretical gastronomy examines the development of recipes; technical gastronomy examines the effect of production tools; and scientific gastronomy examines the chemical and physical properties of foods.

Gastronomy Tourism

The rapid acceleration of global developments in the field of gastronomy has led to a significant transformation that directly affects the tourism sector. In recent years, approximately one fifth of the world’s population has traveled for tourism purposes and the desire to experience the local cuisines of the countries

they visit is the most obvious indicator of this interaction. This phenomenon, called gastronomy tourism, has become an important factor shaping tourists' travel decisions and plays a critical role in increasing the competitiveness of destinations and contributing to local economies (Zengin and Işgın, 2017: 405).

Gastronomy tourism can be defined as a type of travel undertaken for specific purposes such as tasting a particular dish, observing production processes or trying the dishes of famous chefs. In this type of tourism, instead of daily eating and drinking habits, the discovery of local flavors and cultural experiences are at the forefront. The gastronomic richness of a region plays an important role in preferring that region and shaping tourists' travel experiences. Gastronomy tourism not only offers tourists the experience of eating, but also the opportunity to get to know the cultural structure and traditions of the host community closely. In this context, gastronomy tourism can be considered as both special interest tourism and cultural tourism. Researchers such as Akgöl (2012) state that gastronomy tourism provides tourists with both a delicious journey and cultural enrichment.

Social Media

Social media is the general name of digital platforms that enable interaction, information sharing and content production among individuals through internet technologies. Using text, images, video and other multimedia content, these platforms allow users to actively produce content and interact with other users. Unlike traditional media, the production and dissemination of information on social media platforms has been democratized, allowing anyone to become a content creator and consumer. This has made social media a powerful communication tool where individuals can share their thoughts, ideas and experiences over a global network (Çaycı, 2019: 132). In recent years, the popularity of travel centered on food and beverage experiences, called gastronomy tourism, has been increasing rapidly. This situation brings gastronomic products and services of tourism destinations to the forefront and increases the impact of these elements on the competitiveness of destinations. Tourists who actively use social media platforms can follow the social media accounts of restaurants, evaluate their visual content, interact with their comments, and recommend them to other potential customers by sharing this content with their network of followers (Çelik, 2023:1). Social media, one of today's most effective communication tools, has become an important platform that facilitates consumers to obtain information about the gastronomic characteristics of destinations. Imre (2020) Doğan, Pekiner and Karaca et al. (2018)' research also revealed that user comments on social media play a decisive role in shaping tourists' travel decisions.

Mass Media

Mass media can be defined as technological systems that aim to deliver information, ideas and values to a wide audience simultaneously. These tools create a global communication network by enabling individuals to obtain information about the world simultaneously, without geographical limitations. Mass media, which has assumed a central role in many areas of social life such as education, communication, marketing and propaganda, has become a decisive force in the transformation of societies, especially since the second half of the 20th century with technological developments (Kılıç, 2014: 27). The impact of mass media in shaping the cultural structure and social order of societies has long been at the center of academic debates, as emphasized by Yüksel (2009). Tools such as newspapers, radio, television and the internet can convey culinary cultures to large masses. In addition to delivering information and entertainment content to large masses, tools such as newspapers, radio, television and the internet also influence social norms and values. Today with technology developing and changing at a tremendous pace, mass media, It has also come to interfere with food and drink preferences (Çakır, Şengül, Parmaksızoğlu, 2020: 3174). With increasing globalization, food experiences have come to the fore as an international area of cultural interaction. This has led countries to use media tools effectively to protect their gastronomic heritage and make it more visible in the international arena.

METHODOLOGY

In this study, similar aspects and shortcomings of the research problem were identified by compiling the findings obtained from previous studies on the subject determined by the literature review method. In this way, an answer to the research question was sought from a new perspective in the light of the existing literature and the path to be followed in the research process was determined. The main purpose of the study is to examine the effects of television programs and social media on gastronomy tourism in Antalya and to present new findings to the literature in this field. The research population consists of all individuals who follow television programs on gastronomy in Antalya. In the study, it was tried to increase the generalizability of the findings by including the opinions of individuals with different socio-demographic characteristics.

An overview of the Gastronomy Concept

Gastronomy is a multidisciplinary field derived from the Greek words “gastēr” (stomach) and “nomos” (rule, law) and has its origins in Ancient Greece. It refers not only to the act of eating, but also to the production and consumption of food and the cultural, social and economic dimensions of these processes. Gastronomy is intertwined with many disciplines such as agriculture, sociology, anthropology, medicine, environmental sciences, chemistry, economics and

modern technologies. This interdisciplinary character shows that gastronomy is closely related to both science and social sciences. From a science perspective, the importance of physical, chemical and biological factors in the process from food production to consumption is emphasized, while from a social science perspective, the effects of food consumption on social interactions, cultural identities and economic activities are examined. Gastronomy tourism is an important application area of this discipline, enabling people to travel to discover the cuisines of different cultures and have gastronomic experiences. According to studies in the literature, gastronomy is defined in different ways by consumers and producers. For consumers, gastronomy is often associated with the desire to consume delicious food, while for producers, it means preparing and presenting excellent dishes and developing knowledge in this field (Genç, 2021).

Historical Development of Gastronomy

Gastronomy is a comprehensive discipline related to nutrition and food culture that traces its origins to Ancient Greece. The work “Gastronomia”, written in the 4th century BC, is considered one of the oldest written sources in this field. However, the development of gastronomy as a scientific and systematic discipline was mostly shaped by the works of French thinkers and writers in the 18th and 19th centuries. Names such as Jean Anthelme Brillat-Savarin have made extensive studies on food and flavor by approaching gastronomy from a scientific perspective. Prosper Montagné’s “Larousse Gastronomique” has become one of the main references of gastronomy. While the concept of gastronomy is defined as “the curiosity to eat well” in French, it has gained different meanings in different periods and cultures. Throughout history, recipes and cooking techniques have been documented in various civilizations. Chefs such as Apicius, who lived in the 1st century BC, wrote the first recipe book in history. Archaeological findings in Mesopotamia show that cooking has been an important part of human life since prehistoric times (Özdemir, 2022: 6).

The Impact of Social Media on Gastronomy and Gastronomy Tourism

Food choice can be considered an important marker of an individual’s cultural identity. An individual’s food preferences are deeply influenced by factors such as lifestyle, habits and family cultural heritage. Therefore, eating habits can be considered as a reflection of the social and cultural environment in which the individual lives. The act of eating is not only a physiological need, but also a complex process that shapes human social and cultural identity. Food culture helps us understand the historical, social and cultural structures of societies by revealing the human-food relationship in a concrete way.

Throughout history, the act of eating and drinking has been a fundamental activity that brings people together, strengthens social interactions and paves

the way for the establishment of social bonds. Therefore, food culture is not only a biological need but also a social phenomenon. The act of eating has functioned as a platform for individuals to participate in their social networks, construct their identities and share cultural values. Social media has made significant contributions to the spread and transformation of food culture by bringing this social interaction to the digital environment. Today, people use social media platforms to share their food experiences, discover new flavors and create virtual communities. This situation further strengthens the social dimension of food culture and allows individuals to meet their socialization needs.

The rapid increase in food-themed visual and written content on social media platforms in recent years further emphasizes the importance of food as a social phenomenon in the digital age. The increase in the number of food blogs, forums and travel groups shows that people actively use these platforms to exchange information about food, discover new flavors and socialize.

Social media has become a powerful marketing tool for gastronomy tourism, especially in today's world where visual sharing is at the forefront. As Vukolic, Gajić and Penic (2022) state, tourists who follow the social media accounts of restaurants interact with other users by liking, commenting and sharing food photos and thus contribute to the promotion of destinations. Social media is a dynamic and versatile communication tool that shapes individuals' social interactions and identity construction in the virtual environment. Tourists using social media can follow restaurants' social media accounts to like, comment on and share food photos and interact with other tourists (Çelik, 2023: 2). Food posts, in particular, influence the way users present themselves to others, emphasizing the cultural and economic meanings of the food they consume. This situation has triggered individuals to share what they eat, where they eat and with whom they eat (Çaycı, 2019).

Today, food content presented on social media platforms offers a visual feast through aesthetic and appetizing visuals and arouses a strong desire for consumption in individuals. These contents, especially those shared just before a meal, allow individuals to discover dishes from different cultures, making food a source of entertainment and pleasure. In this way, social media has digitized food culture and significantly influenced individuals' consumption habits. Food shows function as a powerful marketing tool that shapes consumption behavior by creating new wants and desires. This reveals the profound effects of social media on eating habits (Çaycı, 2019).

The Concept of Mass Media

Throughout human history, communication has been one of the basic building blocks of social life. With the emergence of the *Homo sapiens* species,

the increase in social interactions necessitated the evolution of communication. Early humans communicated in small communities using simple language structures. However, as the human population increased and geographical distribution expanded, the need for communication between individuals at long distances arose. This need led to the development of visual and auditory communication methods such as cave paintings, fire and smoke signals (Kılıç, 2014:27).

Rapid changes in the industrialization process have increased people's need for communication and necessitated the development of different communication tools. Individuals who want to adapt to changing living conditions have constantly renewed their communication methods in line with the existing technological possibilities. However, instead of replacing the old ones, new communication tools have been added to them, expanding communication networks and making them more efficient. In this process, each communication tool has enriched the communication experience by improving the possibilities offered by previous tools. The evolution of mass media is directly related to the transformations in the social and economic structures of societies. The processes of industrialization and urbanization have diversified people's social interactions and created the need to reach wider audiences. This need went beyond face-to-face communication with a limited number of individuals and triggered the development of mass media. Thanks to technological advances, mass media has enabled mass media to reach ever wider audiences and to transcend geographical boundaries. Today, with digitalization, mass media have created a global communication network by connecting people in every corner of the world (Kılıç, 2014:27). In intercultural communication, individuals increase mutual understanding and appreciation by transferring the unique aspects of their own culture to other cultures (Jones & Quach, 2007; Samoa, 2005). Gastronomy serves as an important bridge in this communication process. When the cuisines of different cultures are presented to other cultures with their historical, social and cultural meanings, both cultural diversity and mutual interaction increase (Barakazi, 2021: 535).

Features of Mass Media

Mass media democratizes access to information in social life, aiming to reach individuals from different social classes equally. These tools contribute to the formation of social consciousness through regular and continuous broadcasts. The public character of mass communication prioritizes transparency and accountability in the communication process. Moreover, the content produced by mass media has the potential to shape social demands and create new needs and habits. Mass media has the power to influence and direct recipients through the credibility of the information they provide. In particular, tools such as radio,

television and social media increase social sensitivity to current events by ensuring that news is delivered instantly and to large masses. Some mass media tools increase the effectiveness of the communication process by instantly measuring the reactions of the recipients through feedback mechanisms (Türkoğlu, 2004, pp.67-68).

The Function of Mass Media

The classification and functions of mass media are frequently discussed topics in the field of communication sciences. One of the most comprehensive studies in this field is the McBride Report prepared by UNESCO. In the report, eight basic functions of mass media are identified and their multifaceted effects on social life are emphasized. (Yüksel, 2001, pp.6-9)

The function of providing news and information

The most basic function of mass media is to inform individuals about current events and developments and to create social awareness. People's need for access to information, entertainment and interpretation makes mass media indispensable. The accuracy and impartiality of the information provided through the means of communication greatly affects societies' conscious and sensitive attitude towards events. In this way, individuals better understand developments at both national and international levels and shape their thoughts and behaviors towards these developments. Mass media trigger social change by influencing the values, norms and behavioral patterns of societies through the content they offer (Kılıç, 2014: 30).

Socialization Function

Mass media plays an important role in the socialization processes of individuals and is effective in the formation of their social identities. These tools provide individuals with information and values, raise their social awareness and facilitate their participation in the social structure. Mass media significantly affects decision-making processes by shaping social views. These tools, which model the thoughts and behaviors of individuals and societies, also enable individuals to see the world from a freer and broader perspective by developing their critical thinking skills (Kılıç, 2014: 31). These effects of mass media also affect gastronomy. Societies are shaped around common food cultures and interact with each other. Gastronomy is one of the most prominent areas of this interaction. According to Karaca and Karacaoğlu (2016), gastronomy reflects the cultural heritage, traditions and values of a society. Hatipoğlu (2010) emphasizes that gastronomy is a tool for understanding the similarities and differences between different societies. By experiencing the flavors of different societies, people both connect with those societies and better understand the cultural identity of their own societies. This has paved the way for the emergence and development of gastronomy tourism (Kodaş & Dikici, 2012).

Motivation Function

Mass media produces content to create a social consensus in line with certain goals and objectives. This content shapes individuals' thoughts, beliefs and evaluations on a subject and offers them a certain perspective. In this way, mass media create a social agenda by directing the interests and efforts of individuals towards certain issues (Kılıç, 2014: 31).

Function of Preparing a Discussion Environment

For a healthy decision-making process in societies, individuals need to have sufficient and reliable information on relevant issues. By making social values and goals more comprehensible, mass media enable individuals to have information on these issues. However, mass media also have the potential to be used as powerful propaganda tools. Those in control of these tools can influence public opinion in the direction they want by shaping information in line with their own interests (Kılıç, 2014: 31).

Education Function

Today, in developing and developed countries, mass media make significant contributions to educational processes and increase the knowledge and skill levels of individuals. Among these tools, television, which stands out with its visual content, has long been recognized as one of the most effective tools in education. Especially in recent years, with the widespread use of social media platforms, the impact of visual communication has increased even more. Visual communication has the potential to reach large masses across differences such as age, religion, language and race. Indeed, in regions where educational opportunities are limited, mass media play a vital role in disseminating cultural values and raising social awareness (Kılıç, 2014: 31). Recently, we live in a dynamic environment that is constantly changing. Naturally, gastronomy education should be in line with these changes. In today's dynamic and ever-changing business world, gastronomy education assumes the responsibility of training qualified individuals who can respond to the needs of the sector. Researchers such as Gillespie and Cuisin (2001) emphasize that gastronomy education should have a flexible and innovative structure that can keep up with the changing dynamics of the sector. In this context, gastronomy education should not only convey theoretical knowledge, but also allow students to develop their practical skills and closely follow current developments in the sector. As İlhan (2008) points out, the development of gastronomy is closely related to economic, social, political and cultural factors. Therefore, gastronomy education should provide students with a comprehensive perspective that will enable them to understand the interaction of these factors. Educators have an important role in this process. By collaborating with the sector, they should

contribute to the transformation of students' theoretical knowledge into practice and help them grow as individuals with the qualifications required by the sector.

Contribution to the Development of Culture

Mass media plays a central role in the process of preservation and development of cultures in a globalizing world. Thanks to these tools, people interact with each other regardless of geographical limitations and have the opportunity to recognize and understand different cultures. However, this interaction power of mass media also brings an important responsibility for the preservation of cultural values. The dissemination of content that may harm cultural values, especially on platforms such as social media where interaction is intense, threatens the cultural identities of societies. For this reason, it is of great importance that the relevant authorities carry out the necessary legal regulations and awareness-raising activities to protect cultural values (Kılıç, 2014: 32).

Entertainment Function

Tourism can be defined as traveling to meet the entertainment needs of individuals. Today, tourism has become more complex with the diversity in the understanding of entertainment. Tourism organizations offer a wide range of activities under the name of leisure tourism at different scales, both domestic and international. Among these, different themes such as adventure sports, cultural tours, gastronomy tours, spa and wellness tourism stand out (Rustamovna, 2023). Today, the increasing pace of life and competitive conditions constitute an important source of stress for individuals. Mass media, as one of the mechanisms for coping with stress, offers individuals an alternative environment where they can get away from the intensity of daily life. These tools increase the psychological well-being of individuals by meeting their needs for rest and entertainment with different entertainment content (Kılıç, 2014: 32).

Integration Function

Industrialization and urbanization processes have led to the weakening of social ties between individuals. In this context, mass media have assumed an important role by meeting the socialization needs of individuals. In particular, social media platforms offer the opportunity to interact between individuals by overcoming geographical limitations and reduce social isolation. Mass media tools enable individuals to actively participate in social life by meeting their social needs such as information sharing, coming together around common interests and social participation (Kılıç, 2014: 33).

Types of Influence on Mass Media

1. The effects of mass media on individuals and societies can be analyzed under the following headings:
2. Shaping attitudes and opinions: Mass media can influence individuals' behavior by shaping their thoughts and attitudes about certain issues.
3. Agenda-setting: It sets the public agenda by determining the focus of public debate and attention.
4. Shaping individual and collective responses: By shaping individual and collective responses to events, it can contribute to the emergence or prevention of social movements.
5. Social control: Indirectly controls the behavior of individuals by spreading social norms and values.
6. Socialization: It plays an important role in the socialization process of individuals and enables them to learn social roles and expectations.
7. Shaping the perception of reality: It affects the way individuals perceive the world, shaping their perception of reality.
8. Dissemination of the dominant ideology: By reflecting social power relations, it contributes to the dissemination of dominant ideologies (Usluata, 1995, pp.79-81).

The Effect of Mass Media on Gastronomy and Gastronomy Tourism

With the increase in competition in the global tourism market, the need for destinations to differentiate themselves has gained importance. In this context, when the impact of audiovisual media on tourism marketing is examined, it is seen that especially television programs and movies play an important role. With the widespread use of marketing techniques such as product placement, television programs and movies have become an effective tool in promoting destinations and influencing tourists' travel decisions. Studies show that visual media shape individuals' perceptions and increase their desire to travel to certain destinations.

Gastronomy-themed television programs are an important type of media that serves both the promotion of local culinary cultures and the ideologies of the global food system. These programs present food not only as an element that meets the need for nutrition, but also as a phenomenon linked to cultural identity, social relations and the economy of experience. These international programs present local cuisines from a global perspective, while at the same time modernizing local cultural elements and presenting them to the masses. This shows that television is an important tool in disseminating the ideologies of the global capitalist system (Tutar and Durukan, 2020: 362).

The Effects of Social Media and TV Programs from Mass Media on Travel Preferences

The technological evolution of mass media has significantly transformed their functionality and social impact. Initially used for the dissemination of information, mass media have come to be used in a wider range of areas such as the dissemination of ideological messages and the shaping of social behavior (Yılmaz & Şenel, 2017: 523).

Behavioral Satisfaction Intention

Behavioral intention is a psychological concept that refers to the tendency of individuals to take a certain action. This intention is influenced by both individual factors and external factors. Mass media, especially in the context of gastronomy tourism, contributes significantly to the tourism sector by shaping individuals' behavioral intentions through the promotion of local food and beverages. Content such as gastronomy-themed television programs enable both individuals and their social circles to learn about a particular region and its cuisine, create awareness in this direction, and even develop food-based travel intentions (Yılmaz & Şenel, 2017: 524).

Arousing Curiosity

Mass media, especially television and social media, significantly influence individuals' consumption and travel decisions. Products and places presented in audiovisual media trigger individuals' purchasing and visiting behaviors. Especially in the field of gastronomy, television programs and social media posts increase individuals' tendency to visit a particular region or restaurant.

Research shows that the impact of social media use on gastronomy tourism is significant regardless of demographic variables such as gender and education level. Television programs, especially with gastronomy-themed content, raise awareness among individuals about food-based travel and create an intention in this direction. These programs increase travel motivation by introducing both the regional and local cuisines to viewers. In addition, the features of the products and services presented on screen can influence individuals' travel decisions in different ways. As a result, both social media and television programs have a positive impact on individuals' travel decisions and encourage gastronomy tourism (Yılmaz & Şenel, 2017: 524).

CONCLUSION AND RECOMMENDATION

Gastronomy has been in a continuous transformation process throughout human history, influenced by cultural, social and economic factors. Developments in communication technologies, especially with the spread of social media platforms, play an important role in this transformation of gastronomy. Social media has become an interactive platform that shapes and

disseminates gastronomy culture by sharing individuals' experiences with food. Especially on visual-oriented platforms such as Instagram, food photos and restaurant experiences are used as tools for individuals to express their identities and reflect their social status.

Gastronomy-themed television programs are also an important factor affecting individuals' travel decisions. These programs introduce viewers to the cuisines of different cultures and make them want to travel. Research shows that individuals who regularly watch television programs are more likely to visit the destinations they want. This reveals that gastronomy-themed content is an effective tool for tourism marketing.

In conclusion, mass media such as social media and television play an important role in the spread of gastronomy culture and the development of the tourism sector. These tools increase individuals' interest in gastronomy, influence their travel decisions and contribute to the promotion of destinations. Therefore, tourism marketers and local governments should develop strategies to develop gastronomy tourism by effectively using platforms such as social media and television. The present study has emphasized the importance of social media and television in shaping gastronomy culture and influencing the tourism sector. However, it is recommended that a combination of qualitative and quantitative research methods should be used for more in-depth studies on this subject. In particular, theoretical frameworks such as social cognitive theory, user experience theory, and cultural studies theory can make significant contributions to research in this field. In addition, the inclusion of new technologies such as artificial intelligence and virtual reality in research in this field may enable the development of innovative approaches in the field of gastronomy and tourism. The interaction between gastronomy, social media and tourism is a very important research area today. The suggestions presented above can add new perspectives to the studies in this field and help to reach more comprehensive results.

REFERENCES

- Aydın, B. O., Duğan, Ö., & Gürbüz, S. (2018). Gastronomy TV program-induced tourism: The case of Gaziantep. *Manas Journal of Social Research*, 6 (5), 33-48.
- Akgöl, Y. (2012). Gastronomy tourism and the evaluation of gastronomy experiences of foreign tourists visiting Turkey (Master's thesis, Institute of Social Sciences).
- Aymaz, G. (2018). An introduction to the social history of communication tools. *Global Media Journal TR Edition*, 8 (16), 124-139.
- Barakazi, M. (2021). Kültürlerarası iletişimde gastronomi. G. R. Küçükdoğan, H. Çiftçi (Ed.), *Communication studies from A to Z-4* (531-549). Ankara: İKSAD Publishing House.
- Baysal, A. and Küçükaslan, N. (2007). *Nutrition principles and menu planning*. Bursa: Ekin Publication Distribution 2nd Edition.
- Çakır, M. U., Şengül, S., & Parmaksızoğlu, E. (2020). Gastronomy Image on the Movie Screen: The Sociological Reflections of Food. *Journal of Tourism and Gastronomy Studies*, 8 (4), 3173-3191.
- Çaycı, A. E. (2019). The Role of Social Media in the Transformation of Globalizing Food Culture: Instagram Gourmets, Unpublished Doctoral Thesis, Istanbul: Istanbul Commerce University Institute of Social Sciences.
- Çaycı, A. E. (2019). Digital food culture in social media. *International Journal of Cultural and Social Research*, 5 (1), 120-136.
- Çelik, M. (2023). The effect level of social media on the development of gastronomy tourism in Türkiye. *Journal of Recreation and Tourism Research*, 10 (4), 1-13.
- Doğan, M., Pekiner, A. B., & Karaca, E. (2018). The Effect of Social Media on Tourism and Tourist Choices: Case of Kars-Doğu Express. *Seyahat ve Otel İşletmeciliği Dergisi*, 15 (3), 669-683. <https://doi.org/10.24010/soid.443504>.
- Genç, M. (2021). Examination of Food and Beverage Trends within the Framework of Gastronomic Trends Türkiye Example. (Uploaded master's thesis). Batman University Graduate Education Institute Department of Tourism Management, Batman.
- Gillespie, C. & Cousins, J. A. (2001). *European Gastronomy into the 21st Century*, Oxford: Butterworth- Heinemann.
- Güler, S. (2007). A general evaluation on the reasons for change in Turkish cuisine. *Ist National Gastronomy Symposium*, Antalya.
- Hatipoğlu, A. (2010). Effects of beliefs on gastronomy: A research to determine the opinions of kitchen managers of five-star hotels in Bodrum. Published Master's Thesis, Sakarya University Institute of Social Sciences, Sakarya.
- Jones, A., & Quach, X. (2007). *Intercultural communication*. The University of Melbourn.
- Işkın, M., Zengin, B. (2017). Assessment of Local Cuisines in Terms of Gastronomy Tourism: A sample of Sivas. *The Journal of Academic Social Science*, 5 (40), 404-415.
- İlhan, A. (2008). Gastronomy and in Türkiye and in the World *Antalya: II. National Gastronomy Symposium, April 10*. <http://www.tgyd.net/?Syf=5&Id=78129> (Reached on: 05 January 2025).
- İmre, N. (2020). An evaluation of using social media in tourism sector, *Journal of Turkish tourism research*, 4(2): 1655-1670.
- Karaca, O.B. & Karacaoğlu, S. (2016). Conceptual examination of Arabic cuisine within the framework of culture, religion and food interaction: The example of Adana province. *Hitit University Social Sciences Institute Journal* 9 (2): 561-584.
- Kılıç, S. (2014). The development of mass media and the role of social media in influencing political communication (Master's thesis, Istanbul Gelisim University Institute of Social Sciences).
- Kodaş, D. & Dikici, E. (2012). A Qualitative Study on the Possible Social Impacts of Gastronomy Tourism in the Rural Region of Ahlat. *Aksaray University İİBF Journal*, 4 (2): 51 – 68.
- Özdemir, K. (2022). Evaluation of spice in terms of gastronomy history and culture (Master's thesis, Istanbul Gelisim University Graduate School of Education).
- Özök, E. (1985). *Dissolution of the Masses in Terms of Communication Theories*, Tan Publications, Ankara, pp7-10.
- Özök, G. A. (2017). Kitchen chefs' views on gastronomy: Qualitative research. *Journal of Tourism & Gastronomy Studies*, 5(Special Issue 2), 182-193.

- Park, N., Kee, K. F. & Valenzuela, S. (2009). Being immersed in social networking environment: Facebook groups, uses and gratifications, and social outcomes. *CyberPsychology & Behavior*, 12(6), 729-733.
- Rustamovna, B. R. (2023). Development of gastronomy tourism in Uzbekistan. *Scientific Impulse*, 1(7), 70–73. Retrieved from <https://nauchniyimpuls.ru/index.php/ni/article/view/5570>
- Samoa, I. (2005). Intercultural communication (Doctoral dissertation, Macquarie University Sydney Australia).
- Semiz, T., & Bora, B. (2014). Social media. Retrieved from: <https://www.stb.org.tr/Dosyalar/Arastirmalar/sosyal-medya.pdf>.
- Turan, A. H. (2011). Factors determining internet shopping consumer behavior: Planned Behavior An empirical test of the theory (TPB). *Doğuş University Journal*, 12(1), 128-143.
- Tutar, C., & Durukan, D. (2020). Television in the construction and transformation of gastronomy culture: The case of Masterchef Turkey and The Taste Turkey programs. *Istanbul University Journal of Sociology*, 40(1), 339-364.
- Türkoğlu, N. (2004). *Social Communication, Definitions, Concepts, Discussions*, Babil Publications, Istanbul, pp.67-6
- Usluata, A. (1995). *Contact, İletişim* Publications, Yeni Yüzyıl Library. Cep University, Istanbul.
- Vukolic, D., Gajić, & T. Penic, M.(2022). The effect of social networks on the development of gastronomy – the way forward to the development of gastronomy tourism in Serbia, *Journal of Tourism Futures*, <https://doi.org/10.1108/JTF-01-2022>.
- Yılmaz, H., & Şenel, P. (2017). Gastronomy Travel Shows on Television the Effect of Programs on Behavioral Satisfaction Intention. *Balıkesir University Journal of Institute of Social Sciences*, 20(38), 521-544.
- Yüksel, E. (2001). *The Agenda-Setting Power of the Media*, Dizi Bookstore, Konya, pp. 6-9.
- Yüksel, Ö. (2009). Mass communication technologie and false consciousness, *Master's Theses*, Dumlupınar University, Social Sciences Institute, Kütahya.
- Zengin, B., Uyar, H., & Erkol, G. (2015). A conceptual review on gastronomy tourism. *National Tourism Congress*, 1, 16.