



JOURNAL OF TOURISM, SUSTAINABILITY AND WELL-BEING

Accessible Tourism through Digital Accessibility for 2030 Agenda for Sustainable Development. Are We Ready for WCAG 3.0?

Elena Fernández-Díaz, Nelson de Matos and Marisol B. Correia

Overtourism in Uzungöl Trabzon, Türkiye: A Study Based on Tourist Reviews

Melik Onur Guzel, Eşref Ay and Ozan Çatir

A Reassessment of Well-Being in Vocational Preparation: A New Model Focusing on Psychological Resilience and Occupational Identification in Tourism Education

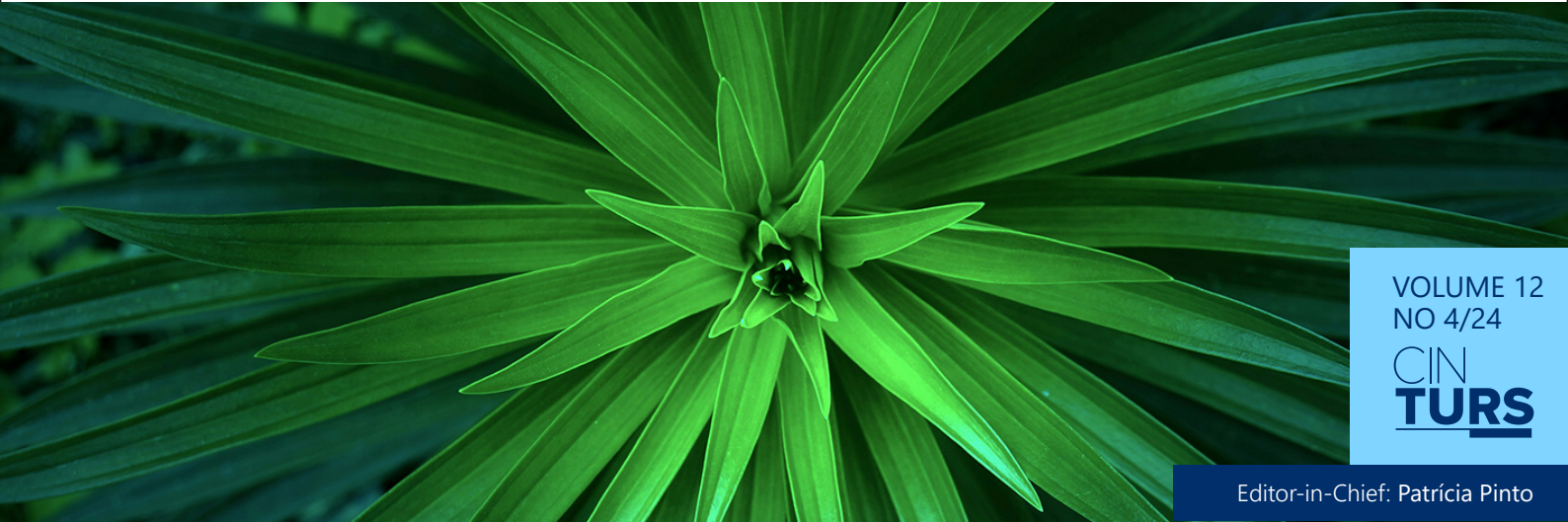
Mehmet Düzgün

Determining the Ecological Citizenship Levels of Tourism Students: The Case of Eskişehir, Turkey

Dönüş Çiçek, Seher Gülenç and Erdem Korkmaz

Strengthening Cross-Border Ties: A Participatory Vision for EuroGuadiana Tourism

Thomas Panagopoulos, Pooyan Sedarati and Joaquim Pinto Contreiras



VOLUME 12
NO 4/24

CIN
TURS

Editor-in-Chief: Patrícia Pinto

TECHNICAL INFORMATION

JOURNAL OF TOURISM, SUSTAINABILITY AND WELL-BEING

2024, VOL. 12, NO. 4

Authors:

Dönüş Çiçek | Elena Fernández-Díaz | Erdem Korkmaz | Eşref Ay | Joaquim Pinto Contreiras | Marisol B. Correia | Mehmet Düzgün | Melik Onur Guzel | Nelson de Matos | Ozan Çatir | Pooyan Sedarati | Seher Gülenç | Thomas Panagopoulos

Editor-in-Chief:

Patrícia Pinto

Associate Editors:

Alfonso Vargas Sánchez, Dora Agapito, Luis Nobre Pereira and Noel Scott

Publisher:

Research Centre for Tourism, Sustainability and Well-being - CinTurs

University of Algarve, Gambelas Campus, Faculty of Economics, Building 8, 8005-139, Faro | cinturs@ualg.pt | www.cinturs.pt

Editorial Board:

Alexandre Panosso Netto, Escola de Arte, Ciências e Humanidades, Universidade de São Paulo, Brasil.

Alfonso Vargas Sánchez, Management and Marketing Department, University of Huelva, Spain.

Ana Cláudia Campos, CinTurs, University of Algarve, Portugal.

Carlos Costa, Department of Economics, Business, Industrial Engineering and Tourism, University of Aveiro, Portugal.

Célia Ramos, CinTurs, School of Management, Hospitality and Tourism, University of Algarve, Portugal.

Chung-Shing Chan (Johnson), Department of Geography and Resource Management, The Chinese University of Hong Kong, Hong Kong, China.

Dora Agapito, CinTurs, Faculty of Economics, University of Algarve, Portugal.

Elisabeth Kastenholz, Department of Economics, Business, Industrial Engineering and Tourism, University of Aveiro, Portugal.

Emily Ma, Department of Hospitality & Tourism Management, Isenberg School of Management, University of Massachusetts Amherst, USA.

Eric Vaz, Department of Geography, Ryerson University, Canada.

Guy Assaker, Adnan Kassar School of Business, Lebanese American University, Lebanon.

Jafar Jafari, School of Hospitality Leadership, University of Wisconsin-Stout, USA.

Javier R. Pérez Aranda, Economics and Business Management Department, University of Málaga, Spain.

João Albino Silva, CinTurs, Faculty of Economics, University of Algarve, Portugal.

Jorge Ramos, CinTurs, University of Algarve, Portugal.

José António Santos, CinTurs, School of Business, Hospitality and Tourism, University of Algarve, Portugal.

Juan Tobal, Department of Psychology, Universidad Complutense de Madrid, Spain.

Kyle Maurice Woosnam, Warnell School of Forestry and Natural Resources, University of Georgia, USA.

Luís Nobre Pereira, CinTurs, School of Management, Hospitality and Tourism, University of Algarve, Portugal.

Manuel Alector Ribeiro, School of Hospitality and Tourism Management, University of Surrey, UK.

Manuela Guerreiro, CinTurs, Faculty of Economics, University of Algarve, Portugal.

Miguel Moital, Department of Sport & Events Management, Bournemouth University, UK.

Neil Ormerod, CinTurs, University of Algarve, Portugal.

Nelson Matos, CinTurs, Faculty of Economics, University of Algarve, Portugal.

Noel Scott, Sustainability Research Centre, University of the Sunshine Coast, Australia.

Renata Tomljenovic, Institute for Tourism, Croatia.

Robin Nunkoo, University of Mauritius, Mauritius.

Saúl Neves de Jesus, CinTurs, Faculty of Human and Social Sciences, University of Algarve, Portugal.

Theano S. Terkenli, University of the Aegean, Greece.

Thomas Panagopoulos, CinTurs, Faculty of Sciences and Technology, University of Algarve, Portugal.

Open Access Policy:

This is a blind peer-reviewed journal.

Articles submitted to this journal should not have been published before in their current or substantially similar form.

The JTSW is diffused by all links related to the Research Center for Tourism, Sustainability and Well-being and is continually online

(<https://www.jsod-cio.net/journal-tsw/index.php/jtsw/index>)

This journal is supported by National Funds provided by FCT- Foundation for Science and Technology through project UIDB/04020/2020 with DOI 10.54499/UIDB/04020/2020 (<https://doi.org/10.54499/UIDB/04020/2020>).

Indexation:

RePec-Ideas | Directory of Open Access Journals | Emerging Sources Citation Index (ESCI) - Clarivate | Latindex | Academia.edu | Google Scholar | RCAAP

Networking and Indexing:

Marlene Fernandes | Sílvia Fernandes

Editorial Assistant:

Marlene Fernandes

Design and Cover Concept:

Bloco D, Design e Comunicação

Cover Image:

Photo by Meiyang Ng on Unsplash

Quarterly Edition

ISSN: 2795-5044

CinTurs, Faro, Portugal

AIMS & SCOPE

The **Journal of Tourism, Sustainability and Well-being (JTSW)** is an international open-access academic journal in the tourism field that publishes high-quality, refereed articles that advance science widely available so that tourism can serve the society, enhance a sustainable development of the destinations, and positively impact the well-being of stakeholders.

JTSW offers itself a multidisciplinary and all-inclusive bridge between theoretical and practical aspects of tourism and the emerging interdisciplinary aspects that can revolutionise the tourism and hospitality industries. While the JTSW maintains its traditional focus on original research, both conceptual and empirical, that clearly contributes to the theoretical development of the tourism field, it also has a far more inclusive and broadened scope to keep up with the new problems that challenge academics and practitioners working in private, public and non-profit organisations globally. JTSW encourages research based on a variety of methods, qualitative and/or quantitative, based on rigorous theoretical reasoning and supported by a strong methodology. Criteria for evaluation include significance in contributing new knowledge, conceptual quality, appropriate methodology, technical competence (of theoretical argument and/or data analysis), and clarity of exposition.

JTSW promotes research on a broad range of topics that explore major trends in the study of relationships between tourism, sustainable development of destinations and well-being of tourism-related stakeholders. Contributions can be from all disciplinary perspectives, with interdisciplinary approaches especially welcomed as far as they apply to the tourism research field. All policy, planning and management aspects of tourism are also encouraged.

The journal is published as a quarterly international review in open access, mainly composed of thematic special issues. The publishing schedule is the last working day of March, June, September and December. Any interested scholar can submit a proposal for the guest-edition of a special issue to the Editor-in-Chief. The proposal should follow the guidelines provided in the Guide for Guest Editors. Each article must follow the publication rules as in the Author Guidelines. The Guest-Editors and the Editor-in-Chief are responsible for the implementation of a double-blind review process. This method ensures that the author(s) and the reviewers remain anonymous to guarantee a fair and impartial review of the submitted manuscripts.

JTSW is published by the Research Centre for Tourism, Sustainability and Well-being (CinTurs), settled at the University of Algarve, Portugal. This journal is funded by National Funds provided by FCT- Foundation for Science and Technology through project UIDB/04020/2020 with DOI 10.54499/UIDB/04020/2020.

The Editorial Board gathers world-renowned experts in different scientific areas, with a striving balance in geographic and gender diversity.

EDITORIAL

The final issue of JTSW in 2024 features five articles that highlight the importance of addressing challenges such as overtourism, digital accessibility and environmental awareness to create a more sustainable and equitable tourism industry. The first article provides a systematic quantitative literature review that demonstrates the growing importance of accessible tourism, particularly through digital accessibility. It shows that despite progress in digital accessibility regulations, the tourism sector is lagging behind in compliance, with significant gaps in awareness and implementation. The second article examines the phenomenon of overtourism in a popular tourist destination in Turkey by analysing tourist reviews on platforms such as TripAdvisor. This research highlights environmental, economic and socio-cultural issues related to overtourism, with a focus on environmental degradation caused by increased visitor numbers, rapid urbanisation and pollution. The third article explores the impact of psychological resilience and occupational identification on well-being in tourism education. The research suggests that educational institutions and policy makers should prioritise fostering resilience and addressing technostress in tourism education programmes to enhance long-term career success in the sector. The fourth article assesses the level of ecological citizenship among tourism students, highlighting the importance of environmental awareness among future tourism professionals. Finally, the fifth article discusses the EuroGadiana initiative, a cross-border tourism project between Andalusia and the Algarve, which aims to develop a sustainable and dynamic tourism model through cooperation. Taken together, the five articles highlight the growing need for sustainability, resilience and inclusiveness in tourism development.

TABLE OF CONTENTS

Aims & Scope/Editorial.....	i
--	----------

Accessible Tourism through Digital Accessibility for 2030 Agenda for Sustainable Development. Are We Ready for WCAG 3.0?.....	299
--	------------

Elena Fernández-Díaz

Nelson de Matos

Marisol B. Correia

1. Introduction	300
2. Literature Review.....	301
3. Methodology.....	302
4. Results	304
5. Discussion and Future Research for 2030 Agenda	311
6. Conclusion	313

Overtourism in Uzungöl Trabzon, Türkiye: A Study Based on Tourist Reviews	319
--	------------

Melik Onur Güzel

Eşref Ay

Ozan Çatır

1. Introduction	320
2. Literature Review.....	321
3. Methodology.....	322
4. Findings.....	325
5. Conclusion	330

A Reassessment of Well-Being in Vocational Preparation: A New Model Focusing on Psychological Resilience and Occupational Identification in Tourism Education.....	336
---	------------

Mehmet Düzgün

1. Introduction	337
2. Conceptual Framework	337
3. Hypothesis Development	341
4. Method	342
5. Findings	344
6. Discussion	347
7. Conclusion	347

Determining the Ecological Citizenship Levels of Tourism Students: The Case of Eskişehir, Turkey.....353

Dönüş Çiçek
Seher Gülenç
Erdem Korkmaz

1. Introduction	354
2. Literature Review.....	355
3. Methodology.....	357
4. Results	358
5. Conclusion	361

Strengthening Cross-Border Ties: A Participatory Vision for EuroGadiana Tourism372

Thomas Panagopoulos
Pooyan Sedarati
Joaquim Pinto Contreiras

1. Introduction	373
2. Methodology.....	374
3. Results	376
4. Conclusion	381

Accessible Tourism through Digital Accessibility for 2030 Agenda for Sustainable Development. Are We Ready for WCAG 3.0?

Elena Fernández-Díaz  ¹

Nelson de Matos  ²

Marisol B. Correia  ³

1. Department of Economics and Business Organization, Faculty of Marketing and Management, University of Malaga, Spain

2. Universidade do Algarve & Research Centre for Tourism, Sustainability and Well-being - CinTurs & Centre for Tourism Research, Development and Innovation – CiTUR, Portugal

3. ESGHT, Universidade do Algarve & Centre for Tourism Research, Development and Innovation – CiTUR & Research Centre for Tourism, Sustainability and Well-being - CinTurs & CEG-IST, Instituto Superior Técnico, Universidade de Lisboa, Portugal

ABSTRACT

Tourism for all, and especially accessible tourism, is a generalized social demand that must be made possible by public authorities and companies in some way linked to the provision of tourist services. International regulations on digital accessibility are advancing so quickly that in just 5 years they have been updated 3 times, and the Web Content Accessibility Guidelines (WCAG) 3.0 draft is currently in place to face the technological challenges of the future. It applies flexibly to all kinds of content, apps, tools, publications and emerging technologies. The importance of this research is determined to learn more about compliance with digital accessibility in the tourism industry. A Systematic Quantitative Literature Review (SQLR) is applied with searches in WoS and Scopus, with a total of 28 articles analyzed from 1999 to 2021 period, using the search strings: “web accessibility” or “accessible tourism”. Results show that digital accessibility is a pending issue in this sector with significant accessibility problems or ignorance about its importance by the public involved in the tourism industry. It provides a vision on the future of digital accessibility in the tourism sector and designs a research agenda with the WCAG, the stakeholders and channels that influence in their environment.

KEYWORDS

Digital Accessibility, Systematic Literature Review, Scopus and WOS Databases, Tourism Agenda 2030, WCAG 3.0.

ARTICLE HISTORY

Received 17 October 2023 Accepted 28 October 2024

1. Introduction

The number of people with disabilities already represents 15% of the worldwide population and this data will increase in the future because there is more and more aging population (World Health Organization, 2011). According to Darcy (1998), one of the main barriers for people with disabilities during their trip is access to information. Therefore, People with Disabilities (PwD) suffer many problems planning their trip because tourism supply agents do not offer them accessible information in most cases (Buhalis & Michopoulou, 2011). For a couple of decades now, this segment has gained importance, through companies specializing in offering products for this segment, which represents a market in full growth, are beginning to be created (Takeda & Card, 2002; Bowtell, 2015) as well as the importance of this segment for the economy in the tourism industry (Dwyer & Darcy, 2011; Michopoulou et al., 2015; Özogul & Baran, 2016). According to the World Health Organization (2024), more than 2.5 billion people require one or more support and reinforcement products, and most of those who use technology use more than one product, further increasing the need for integrated services in enterprises.

The concept of “accessible tourism” or “tourism for all” began to have a greater impact from the report by Baker (1989), since it began to be taken into account in future legislation on tourism and accessibility later on. The internet though websites are considered the most important channel of communication for the commercialization of a tourist product or service as a fundamental tool for customer acquisition. Therefore, errors should be avoided during its construction that pose a barrier and therefore exclude certain users (Macedo & Sousa, 2019).

The World Wide Web Consortium (W3C) (2024) states: “web accessibility means that websites, tools, and technologies that are designed and developed so that people with disabilities can use them”. In this way, this international organization has established a series of regulations that adapt to the needs of technological evolution and the different access channels, be they mobile devices, tablets/ ipad or computers. For this reason, the W3C establishes a series of guidelines and standards for compliance with accessibility that have evolved from the Web Content Accessibility Guidelines WCAG 1.0 to the present, establishing WCAG 2.2 as an international recommendation. Likewise, since July 2023, the W3C is also working on a draft for WCAG 2.2 to evolve to WCAG 3.0 in the future. In this context, this international consortium focuses on digital accessibility from a deeper perspective since there is not only a change in nomenclature, in the case of WCAG 3.0 is “W3C accessibility guidelines”, instead of Web Content Accessibility Guidelines, to adapt more easily to technological evolution and to be more adaptable to changes: websites, apps, tools as well as encourage more accessible user experiences. This series of changes in international guidelines regarding digital accessibility and its constant evolution leads us to carry out a systematic investigation of the literature that indicates whether, from the point of view of the studies, these guidelines are also being taken into account, especially all those carried out up to the year 2021, when the change from WCAG 2.0 (2008 year) to 2.1 (2018 year) took place, and which are the ones that have evolved to WCAG 2.2 (2023 year) and thus to be able to verify if the studies and compliance with accessibility digital in the tourism field is in accordance with its international standards.

This study is based on a comprehensive review called Systematic Literature Review (SLR), contemplating all articles indexed in both WoS and Scopus databases without delimiting a specific time period with search terms related to digital accessibility in tourism sector, taking into account peer review articles, including articles in English, Portuguese and Spanish, refined by Web of Science Core Collection in the case of WoS database. As an exclusion method we have based ourselves on those articles that did not expressly show concepts of digital accessibility in the title, summary or keywords, that in some way alluded to digital accessibility, but the content of the article did not explicitly analyze it, or articles that were not related to digital accessibility in the tourism context. Therefore, a total of 28 articles were selected about digital accessibility in the tourism industry in both databases, also excluding duplicates. This method allows us to analyse more in depth on digital accessibility in the tourism industry, and what new trends can be detected in this sector. Few studies analyse the use of Internet in the accessible tourism market. The main contribution of this study is to complete studies in this field analysing the digital accessibility in the industry tourism, through websites, applications, social networks or any other digital tool that serves as a communication channel in this sector and that affects PwD.

This paper is organized as follows: after this introduction, section two presents a review to understand digital accessibility issues, concept and main guidelines. Section three presents details about the methodology based on a Systematic Quantitative Literature Review (SQLR). In section four, the results of the literature review and discussion with the future 2030 agenda research are presented. Finally, section five highlights the main conclusions and practical implications of the study.

2. Literature Review

The use of the internet worldwide is increasing year after year, since January 2021, 4.95 billion people in the world use Internet, which represents an increase of 192 million over the previous year (Datareportal, 2022). The internet has become one of the most important means in recent years for people who have some type of disability since it allows them to have access to a lot of information, along with the support of family, friends and associations (Dominguez, 2008). This change on the way people with disability accesses information, originated what is commonly termed as accessible tourism.

For Darcy and Dickson (2009) state that: "Accessible tourism enables people with access requirements, including mobility, vision, hearing and cognitive dimensions of access, to function independently and with equity and dignity through the delivery of universally designed tourism products, services and environments" (p. 34). However, various authors (e.g., Saraiva, 2017) argue that "Tourism for all", "Inclusive tourism" or "Accessible tourism" represent the same reality.

The 2030 Agenda and the Sustainable Development Goals (SDGs) promote the balance of social, economic and environmental sustainability. Objective 10 is based on the reduction of inequalities in groups at risk of exclusion, such as the elderly or people with disabilities (United Nations Development Programme, 2021).

The web is essential, not only to provide information, to promote the sale of tourist products, but also, as a way for improving people's planning of their leisure trip and evaluation of their experience (Lopez de Ávila Muñoz & García Sánchez, 2015). Moreover, according to the authors, web increases the attractiveness of the destinations using mobile tourist applications in which key information for tourists are presented. However, some authors claim that it is very important to take into account the design of the website and its adaptation to other mobile devices (Schieder et al., 2014). Several industry players have already shown that the use of different devices (e.g., desktop, mobile) is a reality which academics and industry managers must face (Statcounter Globalstats, 2023), to adopt the web information and accessibility to people with disability. According to Statcounter Globalstats (2023), the market share of Desktop vs. Mobile vs. Tablet on a global level based on July 2023 data are 42.37%, 55.7% and 1.94%, respectively. Therefore, the fact that the web must also be adapted to mobile devices is justified.

Moreover, the concept of web accessibility states that web sites must be designed with the idea that they can be accessible to as many people as possible (Witt & McDermott, 2005). In this regard, in 1994, an international community funded the World Wide Web Consortium (W3C) with the aim of making the content and information of the webs available to all types of users. Its Director, Tim Berners-Lee and inventor of the World Wide Web, stated that "The power of the Web is in its universality. Access by everyone regardless of disability is an essential aspect" (World Wide Web Consortium, 1997).

The W3C (1999) establishes the guidelines that must be met based on verification points and establishing certain levels of compliance with Web accessibility: Web Content Accessibility Guidelines (WCAG). These guidelines are based on levels of conformity according to the level of compliance of each of the verification points: Level of compliance A (the least demanding), double A; and triple A (the most demanding).

The different variants that have occurred in recent years regarding the WCAG of the W3C are: WCAG 1.0 (in May 1999); WCAG 2.0 (in December 2008) and WCAG 2.1 (in June 2018). The latter includes 13 guidelines, maintaining the four principles of WCAG 2.0 (perceptible, operable, understandable and robust). The first public working draft of WCAG 2.2 were announced in February 2020 and since July 2023 it is the recommendation established by the W3C. Global laws pertaining to digital accessibility are developing at such a rapid pace that, in the last five years, they have undergone three updates. The WCAG 3.0 draft is presently in effect in order to meet future technical problems. It applies more flexibly to all kinds of content, apps, tools, publications, and emerging technologies.

In the same sense, there are different methodologies that can be applied in the evaluation of digital accessibility, among them the possibility of using automatic tools. For this, the experts carrying out the research have to start by analyzing the tools available on the market and which is the most suitable for their evaluation. The W3C identify a list of 164 tools or identify studies that tried to solve the same problem with automatic tools (e.g., Shi, 2006; Serrano, 2009; Akgül & Vatansever, 2016; Domínguez Vila et al., 2018). Thus, due to the importance of digital accessibility in the tourism industry, studies carried out are increasingly necessary, about all related with PwD: difficulties in planning their trip and the information sources used (Daniels et al., 2005; Buhalis & Darcy, 2010; Michopoulou & Buhalis, 2013; Porto et al., 2019). For this reason, based on the evolution of international regulations on digital accessibility in the face of new technological challenges, more in-depth research is required in the tourism field about the studies that have been carried out up to the year 2021, at which time there is an important step between WCAG 2.1 and WCAG 2.2.

3. Methodology

This study is based on a Systematic Quantitative Literature Review (SQLR) and according to DeMatos et al. (2021) and Moher et al. (2015) this method requires several steps: Research question(s) to identify the objectives of the SQLR method; A review protocol should be developed; A literature search; Extract literature, summarizing and listing the full-text articles data and Synthesizing findings, developing a content analysis.

3.1 Systematic Quantitative Literature Review (SQLR)- Steps

3.1.1 Research Questions

This study seeks to answer the following research questions:

- RQ1.** How often have studies on digital accessibility in tourism been published over time?
- RQ2.** Which journals publish papers on digital accessibility in tourism?
- RQ3.** Which authors do the most research on digital accessibility in the tourism sector?
- RQ4.** Which is the affiliation of the first authors analyzed?
- RQ5.** What are the main contexts evaluated?
- RQ6.** What types of studies have been carried out in the articles analyzed?
- RQ7.** What type of online tools or services, real users and experts have helped to evaluate digital accessibility in tourism?
- RQ8.** Which WCAGs and levels of conformity have been used to evaluate digital accessibility in tourism?
- RQ9.** What are the main keywords used? The main motivation of these questions is to get future research for 2030 agenda about digital accessibility in the tourism sector.

3.1.2 A Review Protocol

The protocol used in this study is defined in Appendix A. The main selection criteria of the articles analyzed in this study were based on having been peer-reviewed, written in the English, Spanish or Portuguese language and taking account the following subject areas: social sciences, business, management and accounting, psychology and computer science. Table 1 presents the search strings and Boolean operators used in this analysis. The terms web accessibility, accessible tourism, tourism accessibility and tourism marketing accessibility were chosen.

Table 1. Search Terms and Boolean Operators on SCOPUS and Web of Science

Boolean operators without any selection criteria		
Database	Search Strategy	Results
Scopus	(TITLE-ABS-KEY ("web accessibility") OR TITLE-ABS-KEY ("accessible tourism") OR TITLE-ABS-KEY ("tourism accessibility") OR TITLE-ABS-KEY ("tourism marketing accessibility"))	1990
Web of Science (All databases)	TI=web accessibility AND AB=web accessibility AND AK=web accessibility OR TI=accessible tourism AND AB=accessible tourism AND AK=accessible tourism OR TI=tourism accessibility AND AB=tourism accessibility AND AK=tourism accessibility OR TI=tourism marketing accessibility AND AB=tourism marketing accessibility AND AK=tourism marketing accessibility	563
Boolean operators with filters applied in the selection of the articles		
Scopus	(TITLE-ABS-KEY ("web accessibility") OR TITLE-ABS-KEY ("accessible tourism") OR TITLE-ABS-KEY ("tourism accessibility") OR TITLE-ABS-KEY ("tourism marketing accessibility")) AND (LIMIT-TO (SRCTYPE, "j")) AND (LIMIT-TO (DOCTYPE, "ar")) AND (LIMIT-TO (SUBJAREA, "COMP") OR LIMIT-TO (SUBJAREA, "SOCI") OR LIMIT-TO (SUBJAREA, "BUSI") OR LIMIT-TO (SUBJAREA, "PSYC")) AND (LIMIT-TO (LANGUAGE, "English") OR LIMIT-TO (LANGUAGE, "Spanish") OR LIMIT-TO (LANGUAGE, "Portuguese"))	560
Web of Science	Refined by: Web of Science Core Collection; Languages: English or Spanish or Portuguese; Document Types: articles	231

Source: Own Elaboration (2022)

3.1.3 A Literature Search

The Systematic Literature Review (SLR) methodology included all articles indexed in both WoS and Scopus databases without delimiting a specific time period with search terms related to digital accessibility in tourism sector. The search was developed in August 2021, taking into account peer review articles and language in English, Spanish or Portuguese. In the case of WoS database, it was refined by Web of Science Core Collection. As an exclusion method we have based ourselves on those articles that did not expressly show concepts of digital accessibility in the title, summary or keywords, that in some way alluded to digital accessibility but the content of the article did not explicitly analyze it, or articles that did not they were related to digital accessibility in the tourism context.

Finally, after the search from Scopus and Web of Science databases, 791 articles were downloaded and imported to Mendeley.com (a reference manager software) including the title, abstract and keywords of each article. In this process, the duplicate publications (n=90) were eliminated, resulting in 701 articles for screening taking into account inclusion criteria. In the last step of screening, as shown in Table 2, a total of 673 articles were identified to be excluded due to inadequate topic, or nor being relevant to the study's aim. Finally, 28 publications were selected and the full-text was evaluated for content analysis.

Table 2. Article Selection and Screening Steps

Step 1. Source and Keyword selection	Step 2. Recording preliminary results
Sources • Scopus • Wos Timeframe (without date limitation): From March 1999 to August 2021. Keyword set: web accessibility, accessible tourism, tourism accessibility, tourism marketing accessibility.	Showing results first round from keyword search in the two databases • Scopus= 560 • Wos= 231 Total= 791 articles
Step 3. Screening related articles	Step 4. Final articles screening
The three authors read the title, abstract and keywords of each manuscript for screening the articles. Articles are categorized into three groups: 1) Digital accessibility in tourism context explicitly stated in the article's title, abstract, or keywords 2) Digital accessibility in tourism context could be inferred, but the contents are not explicit 3) The articles are not related to the digital accessibility in tourism context Records after duplicated removed between both databases analysed=90	All authors selected articles in category 1. The results were: Sources • Scopus • Wos Total articles for synthesis= 28

Source: Own Elaboration based on De Matos et al. (2021)

3.1.4 Extract Literature and Synthesizing Findings

In this stage, all articles (n=28) are analyzed in a listing, using an Excel spreadsheet taking into account information such as: the author's names, publication title, publication year, methodology, main findings, type of WCAG used, journal's name, context, online tools for the analysis, affiliations and keywords.

The full paper is revised by the authors to verify its suitability, also sharing the Excel document of analysis among all the authors of the article for its joint validation. In this last step, the content analysis of each full paper is carried out, to analyze them from a conceptual point of view, highlighting the main theories that are used in each of their investigations. In this way, and based on the methodology used by DeMatos et al. (2021), the results were further divided into two additional main sections: a) the descriptive analysis, and b) main theories and future research for 2030 agenda.

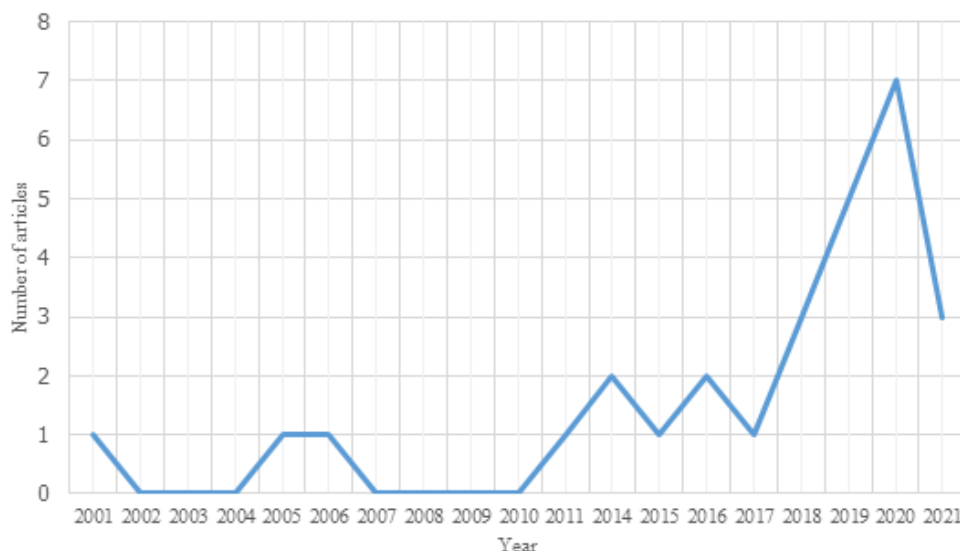
4. Results

4.1 Descriptive Analysis

As a result of the first research question about the frequency of publication, the articles selected and analyzed taking into account the criteria defined have covered the digital accessibility in tourism industry topic from 2001 to 2021 (Figure 1).

Figure 1 shows that, since 2019, there has been a significant increase in publications on the subject evaluated compared to 2018, from 3 to 5. During 2020, a slight growth continues with respect to 2019, with 7 articles published. It follows, therefore, that there is a growing interest within this subject. In the year 2021, it follows that the growth figure could be maintained, since from January to August there are 3 articles published. However, there are time intervals where nothing is published, as can be seen in the following years: 2002-2004; 2007-2010; even though WCAG 1.0 was officially declared in May 1999.

Figure 1. Number of Articles Retrieved Per Year



Source: Own Elaboration (2022)

Regarding the second research question, related to articles published / year by journals (Table 3), it is highlighted that the 28 studies analyzed were published in 26 different journals. Among the magazines in which they have been published, two of them stand out in which 2 publications are produced in each of them: RISTI- Revista Ibérica de Sistemas e Tecnologias de Informação and UAIS- Universal Access in the Information Society.

Table 3. Published Articles/Year by Journals

Journals Year	AJHTL	CHB	CIT	DR	GTRIT	ID	ITT	IJCHM	IJERPH	IJEFM	IJALS	JADA	JHTI	JHTT	JTAER	JUCS	LHT	PRTPC	QG	RISTI	SJHT	S	THR	TM	UAIS	V	Total
2001																									1	1	
2005								1																			1
2006																								1			1
2011																		1									1
2014			1														1										2
2015		1																									1
2016											1														1		2
2017				1																							1
2018						1	1														1						3
2019	1			1				1											1	1							5
2020									1			1	1	1						1		1			1		7
2021															1		1					1					3
Total	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	2	1	28

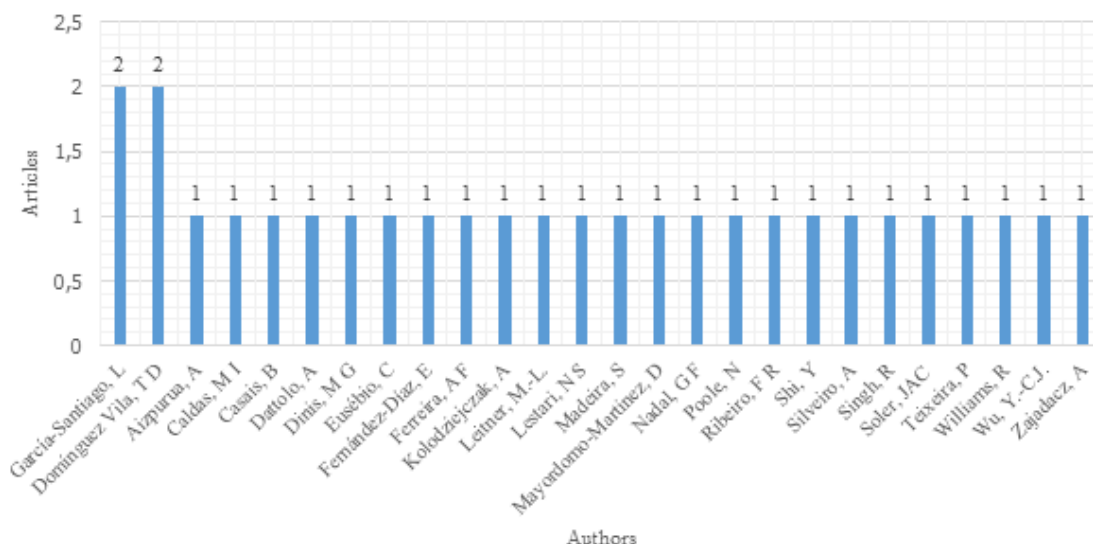
Notes: AJHTL-African Journal of Hospitality, Tourism and Leisure, CHB-Computers in Human Behavior, CIT-Current Issues in Tourism, DR-Disability and Rehabilitation, GTRIT-Gran Tour: Revista de Investigaciones Turísticas, ID-Information Development, ITT-Information Technology and Tourism, IJCHM-International Journal of Contemporary Hospitality Management, IJERPH-International Journal of Environmental Research and Public Health, IJEFM-International Journal of Event and Festival Management, IJALS-International Journal on Advances in Life Sciences, JADA-Journal of Accessibility and Design for All, JHTI-Journal of Hospitality and Tourism Insights, JHTT-Journal of Hospitality and Tourism Technology, JTAER- Journal of Theoretical and Applied Electronic Commerce Research, JUCS- Journal of Universal, Computer Science, LHT-Library Hi Tech, PRTPC- Pasos- Revista de Turismo y Patrimonio Cultural, QG-Quaestiones Geographicae, RISTI- Revista Iberica de Sistemas e Tecnologias de Informacao, SJHT-Scandinavian Journal of Hospitality and Tourism, S- Sustainability, THR- Tourism and Hospitality Research, TM-Tourism Management, UAIS- Universal Access in the Information Society, V- Vine.

Source: Own Elaboration (2021).

The results obtained on the third research question about the number of publications by author, it is interesting to note that 4 of the 28 articles analyzed are signed by only one author (14.3%), followed by 6 of them that are signed by two authors (21.4%) and 12 of the 28 articles evaluated are signed by 3 authors (42.8%). Finally, the articles that have more than three authors are 6 (21.4%).

In Figure 2, it is shown that the most productive authors in the area are Garcia-Santiago and Domínguez Vila (Spanish affiliation).

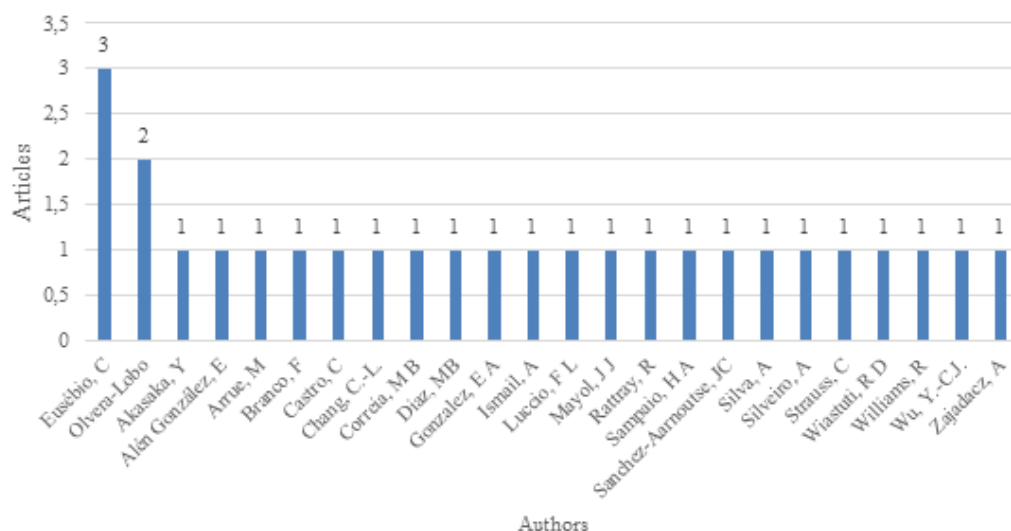
Figure 2. Number of Publications by Author (First Author)



Source: Own Elaboration (2022)

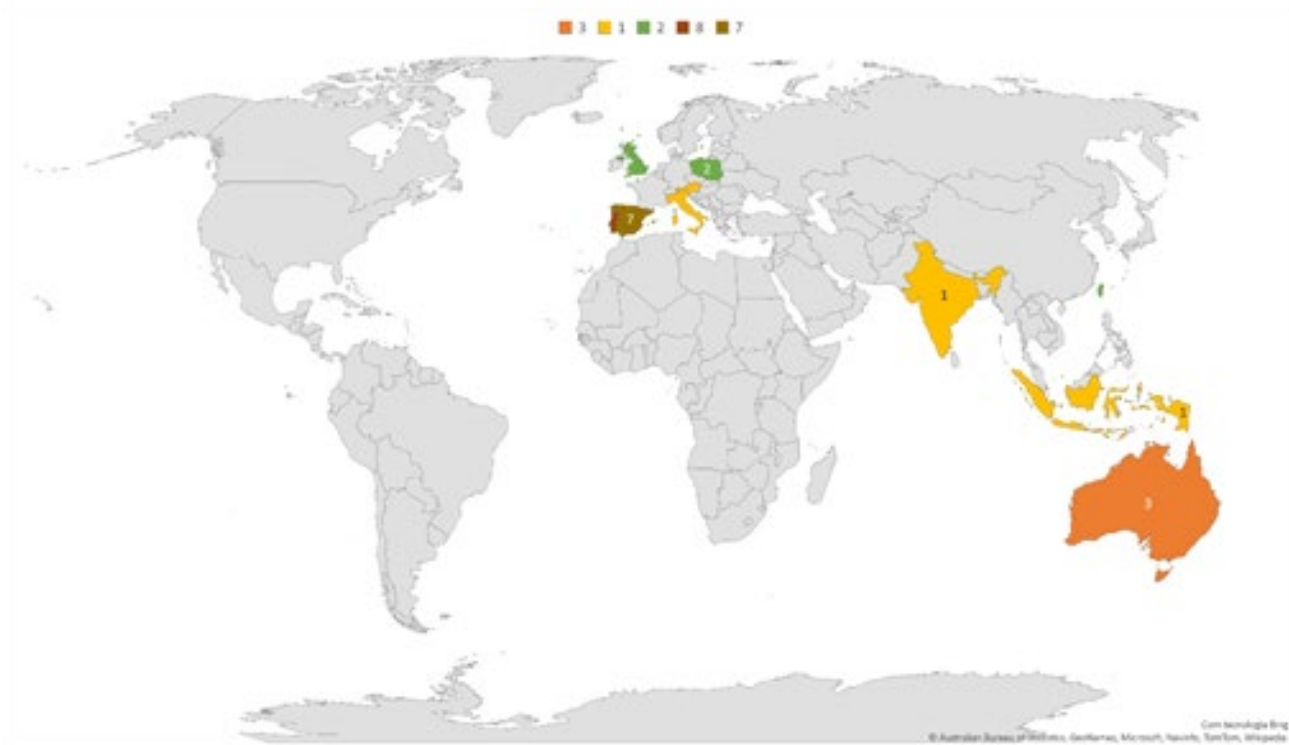
Regarding the data of the second author, Eusébio (Portuguese affiliation) and Olvera-Lobo (Spanish affiliation) are the following most productive in the area (Figure 3).

Figure 3. Number of Publications by Author (Second Author)



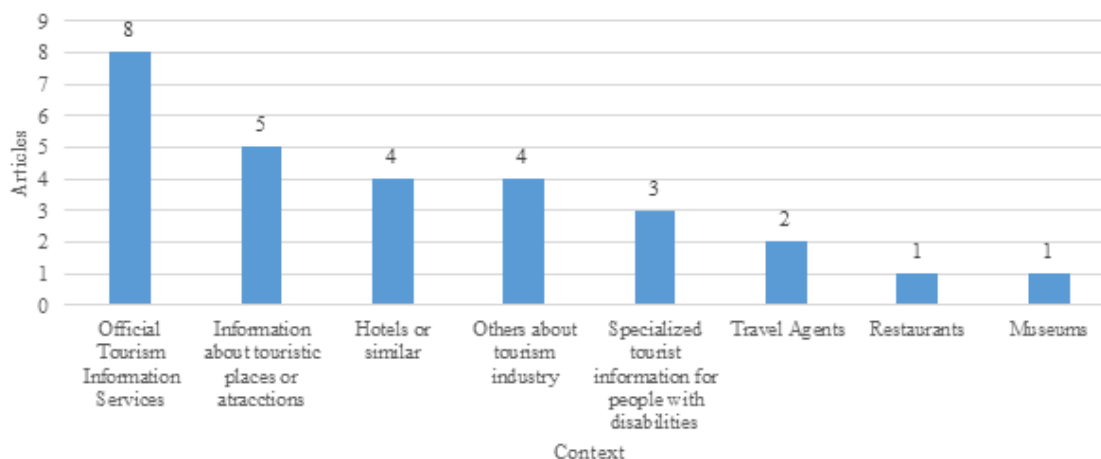
Source: Own Elaboration (2022)

In relation to the fourth research question, the affiliation of the first author included 10 countries (Figure 4). The top three countries with the most published articles were Portugal (eight articles, 28.6%), Spain (seven articles, 25%) and Australia (three articles, 10.7%).

Figure 4. Authors' Country of Affiliation

Source: Own Elaboration (2022)

Answering the fifth research question, the main contexts in which studies applying the digital accessibility concept in the tourism industry (Figure 5), were in the Official Tourism Information Services (eight articles, 28.6%), Information about touristic places or attractions (five articles, 17.8%), Hotels or similar (4 articles, 14.3%). In the case of others, areas such as music festival, urban rail systems and other services are contemplated.

Figure 5. The Context in which Articles Studies were Conducted

Source: Own Elaboration (2022)

Table 4 shows the results that answer the sixth research question. For this purpose, the type of studies that have been carried out in the articles evaluated are categorized based on the categories used by Kabassi (2017):

- 1) Inspection methods: the evaluation and analysis are carried out exclusively by experts in the digital field. According to Cuncliffe et al. (2001), there are different method inspection guidelines;

- 2) Empirical methods: these methods are based on groups of final users. For example, user test to end customers or performing different tasks on the web and checking their results more empirically;
- 3) Combination of methods: the evaluation is carried out by combining the two previous methods: experts and users;
- 4) Automatic tools: when using digital analysis either tools, in this case on accessibility, independently or combined with previous methods.

Table 4 also includes information on the number of websites and apps analyzed in each case as well as the type of evaluation (qualitative or quantitative). Of the total of articles evaluated, 21 carried out analyzes exclusively of websites (75%) and 2 have carried out analyzes of websites and apps (7.14%). However, only 3 of the selected articles have exclusively researched apps (10.71%). Therefore, it is stated that the majority of studies have focused on the analysis of websites (82%) (either combined with an app or independently). Regarding the type of evaluation (qualitative or quantitative), 8 of the articles analyzed combine both types of evaluation (28.6%). The 42.8% (12 articles) considered only quantitative evaluation and 28.6% (8 articles) used only qualitative evaluation. Therefore, most of the articles (20 of them) used a quantitative analysis (71.4%). With regard to the type of data and the method used, it should be noted that the majority of studies were based on analysis exclusively with “automatic tools” ten articles, 35.7%). The second most used method exclusively, without combining it with other methods, is “inspection methods” (eight articles, 28.6%). However, only one article was evaluated exclusively through “empirical method” and the exclusively combination of method were used by three articles (10.7%). If we take into account other combinations, the following data are highlighted: “Inspection methods with Automatic tools” (four articles, 14.28%), “Empirical methods with automatic tools” and “Combination of methods with Automatic tools” (one article each one). It can therefore be seen that the majority of studies mainly used “automatic tools” and “the inspection method”, either exclusively or in combination with each other.

Table 4. Research Methodology

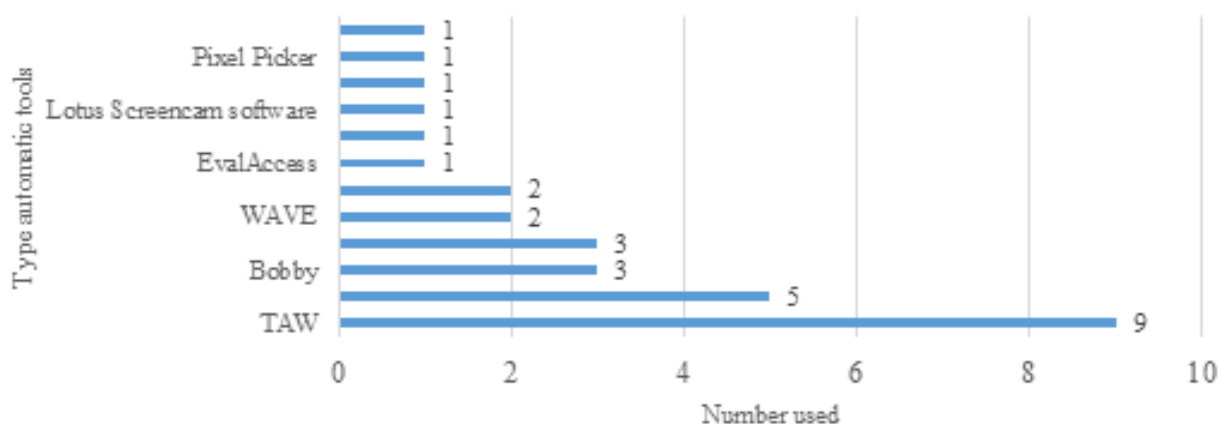
	No of web	No of apps	Type of evaluation		Type of method
Aizpurua et al., 2015	4	0	Qualitative. Exploratory study. Test with blind users.	Quantitative. Automated Web accessibility evaluation tools.	Combination of methods / Automatic tools
Dattolo et al., 2016	2	0	Qualitative. Case study. Literature survey and Interviews a group of specialized therapists and professionals. Preliminary test on a single user and finally test on a group of users.	Quantitative. Assessment questionnaire to the family of user.	Combination of methods
Eusébio et al., 2020	182	0		Quantitative. Automated Web accessibility evaluation tools.	Automatic tools
Fernández-Díaz et al., 2021	39	33		Quantitative. Exploratory study.	Automatic tools
García-Santiago & Olvera-Lobo, 2018	42	0	Qualitative. Analysis by experts.		Inspection methods
García-Santiago & Olvera-Lobo, 2021	78	0		Quantitative. Exploratory study. Automatic method using web tools and a manual method for more in-depth examination	Combination of methods
Poole, 2001	2	0	Qualitative. User test	Quantitative. Assessment questionnaire to the family of user.	Empirical methods / Automatic tools
Shi, 2006	66	0		Quantitative. Exploratory study. Automatic method using web tools. ANOVA analysis.	Automatic tools
Teixeira et al., 2021	344	0		Quantitative. Descriptive analysis. Automatic method using web tools. ANOVA and KruskalWallis analysis.	Automatic tools
Williams & Rattray, 2005	173	0	Qualitative. Web accessibility manual checks by experts	Quantitative. Automatic method using web tools.	Inspection methods / Automatic tools
Silveiro et al., 2019	182	0		Quantitative. Automatic method using web tools. Descriptive analysis and clusters using the Ward method. ANOVA	Automatic tools

	No of web	No of apps	Type of evaluation	Type of method
Leitner et al., 2016	89	0	Qualitative. Manual tests by experts and interviews	Quantitative. Automatic method using web tools. Inspection methods / Automatic tools
Madeira et al., 2020	0	14	Qualitative. Manual checks by experts	Quantitative. Automatic method using app tools. Inspection methods / Automatic tools
Nadal & Mayol, 2011	102	0		Quantitative. Automatic method using web tools. Automatic tools
Singh et al., 2020	57	0		Quantitative. Automatic method using web tools. Cluster analysis. NbClust technique (Charrad et al., 2014) Automatic tools
Domínguez Vila et al., 2017	210			Quantitative. Automatic method using web tools. Automatic tools
Caldas et al., 2020	15	0		Quantitative. Automatic method using web tools. Automatic tools
Casais & Castro, 2020	15	0	Qualitative. Structured observation and content analysis.	Quantitative. Automatic method using web tools. Inspection methods / Automatic tools
Dinis et al., 2020	0	0	Qualitative. Exploratory study. Observation by experts (Facebook, Instagram, Twitter and YouTube).	Inspection methods
Domínguez Vila et al., 2018	14	0		Quantitative. Automatic method using web tools. Cluster analysis. the Calinski-Harbasz index (CH) was applied (Dolnicar & Leisch, 2010). Automatic tools
Ferreira et al., 2020	212		Qualitative. Content Quality analysis	Inspection methods
Lestari et al., 2019	1	1	Qualitative. Content Quality analysis	Inspection methods
Ribeiro et al., 2018	0	14	Qualitative. Content Quality analysis	Inspection methods
Wu et al., 2014	1	0	Qualitative. Interviewed experts. Clusters analysis.	Inspection methods
Zajadacz, 2014	0	0		Quantitative. Questionnaire-based interview (292 Deaf individuals and 1780 hearing people). Statistical analysis using Pearson's Chi-square Empirical methods
Soler et al., 2019	318	0	Qualitative. Focus group, extensive literature review, formulation of semi-structured interviews. Target: Managers of properties	Quantitative. Questionnaire through telephone calls. Target: Managers of properties Combination of methods
Kolodziejczak, 2019	1	0	Qualitative. Case study analysis and literature review	Inspection methods
Mayordomo-Martínez et al, 2019	0	1	Qualitative. Case study analysis and development of a new mobile app is described. Heuristic evaluation from experts to perform the usability audit of the application.	Inspection methods

Notes: *Articles that do not analyze a website or app, but rather evaluate other digital media, either on social media or because they are more theoretical studies. In that case the number has not been specified and appears as zero.

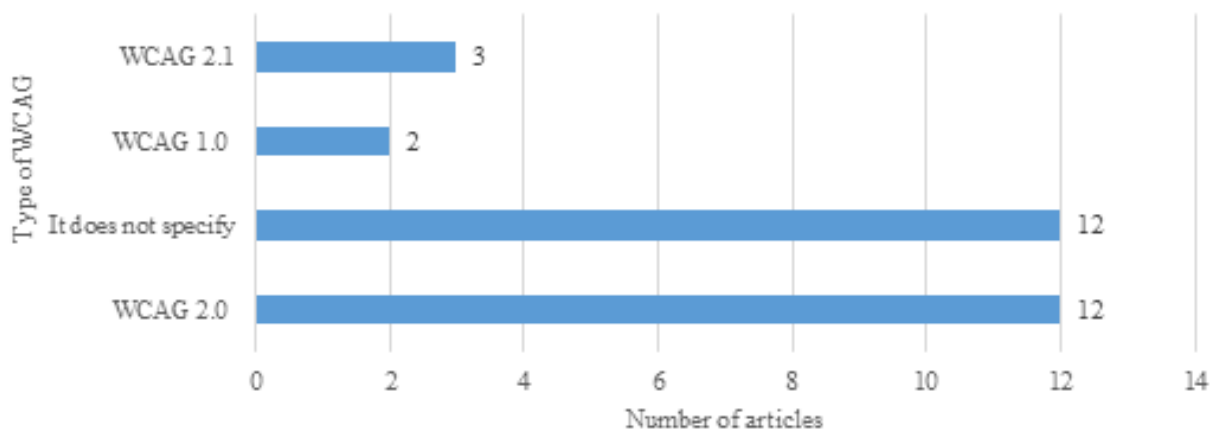
Source: Own Elaboration (2022) based on Kabassi (2017).

Figure 6 shows the data that answers the seventh research question on the type of automatic tools. The main tools were Taw (32%) and Access Monitor (17.8%), following by Bobby and Achecker (both 10.7%) and WAVE (7%), especially related to the analysis of websites. The next most used is Accessibility Scanner, more related to the evaluation of Android apps (7%).

Figure 6. Type of Automatic Tools Analysed

Source: Own Elaboration (2022)

In relation to the WCAG evaluated and answering to the eighth research question (Figure 7), the most evaluated so far are the WCAG 2.0, in 12 of the 28 articles analyzed (42.8%). It is especially relevant that almost half of the articles researched do not specify the type of WCAG used, or are based on other variables. Despite the fact that WCAG 2.1 are the international regulations in force since 2018, few studies consider it. In addition, there are 12 studies that do specify the level of the WCAGs that they have evaluated, of which 9 analyze the three levels A, AA and AAA. The rest study A or double A.

Figure 7. Type of WCAG Analyzed

Source: Own Elaboration (2022)

The ninth research question in relation to the keywords of the evaluated articles determines that the words that are most used in combination with others are “accessibility” associated with the concept “web accessibility” and “tourism” combined with the word “accessible” (Figure 8).

Figure 8. Main Keywords used for the 28 Articles Analysed



Source: Own Elaboration (2021)

5. Discussion and Future Research for 2030 Agenda

The main conclusion of this study is that all the articles analyzed comply with accessibility, whether it's a website, an app or another support. Moreover, it was found that, 100% present results that explain the non-compliance with the principles of accessibility in high percentages or in a large part of the variables analyzed. In addition, this study notes that the studies even coincide in the type of errors, both in the levels and in the principles of the WCAGs. For example, level A errors and problems in the perceivable and robust principals (Eusébio et al., 2020; Silveiro et al., 2019; Teixeira et al, 2021). All agree in their conclusions that accessibility is a pending issue in the digital field within the tourism sector. This study's results also contrast with other studies in other sectors where non-compliance with digital accessibility can be seen in 70%-100% of the websites analyzed (e.g., Alexander, 2003; Becker, 2004). From the public's point of view, it is especially notable that most studies focus on analyzing accessible compliance with digital media, but only a few complement such research with the opinion of other users who are directly involved, for example, hotel managers, public institutions, employees. Soler et al. (2019) is among the few exceptions, since they studied the level of knowledge hotel managers had about web accessibility.

Below is an example of the main conclusions and theories (Table 5).

Table 5. Main Theories and Conclusions as an Example of the Articles Analysed

Example of articles analyzed	Main theories and conclusions
(Aizpurua et al., 2015, p. 159)	"Non-accessible sites create more uncertain situations than the accessible ones, which suggests there is a relationship between the the lack of accessibility and uncertainty"
(Eusébio et al., 2020, p.180)	"[...] the websites of TA reveal several problems in relation to accessibility, particularly in the basic accessibility requirements (level A of the WCAG) "
(Fernández-Díaz et al., 2021, p. 888)	"[...] the percentage of non compliance with accessibility criteria is very high in DMOs in Portugal and, especially, Spain."
(García-Santiago & Olvera-Lobo, 2021, p. 1)	"[...] there is still much to do before complete web accessibility and usability at AA and AAA level can be achieved."
(Williams & Rattray, 2005, p. 78)	"The hotel web sites revealed very poor levels of accessibility in both absolute and relative terms."
(Silveiro et al., 2019, p. 18)	"[...] the Travel Agency websites reviewed have some accessibility issues, mainly in the WCAG basic requirements (level A)"
(Domínguez Vila et al., 2017, p. 9)	"[...] there are numerous issues and problems in accessing the information contained in the official tourism websites of countries around the world."
(Soler et al., 2019, p. 110)	"[...] only 1 out of three managers are familiar with the concept, most of them (67%) does not provide the customers with an accessible website [...]"

Source: Own Elaboration (2022)

Proposition 1: WCAG 2.1 should continue to develop the theoretical foundations to incorporate the evolution of the digital world.

Taking into account the previous literature on the current regulations of the WCAG and that the studies analyzed still based on the WCAG 2.0 (Eusébio et al., 2020; García-Santiago & Olvera-Lobo, 2021; Teixeira et al., 2021; Silveiro et al., 2019). Hence, it is recommended continue analysing the evolution of digital accessibility in terms of compliance WCAG 2.1 (in June 2018) (W3C, 2020), especially considering that the draft of the WCAG 2.2 were already available (since February 2020).

Proposition 2: Digital accessibility should not focus mostly on websites; they must also consider other media and / or digital supports.

Websites and the Internet are regarded as the most important sources of information on a particular destination (Choi et al., 2007; Doolin et al., 2002; Li and Wang, 2011). According to data from the market share in July 2023, they exceed 57.64% considering the sum of mobile and tablet vs desktop (Statcounter Globalstats, 2023). Therefore, the use of mobile phones and tablets in front of the computer is increasing more and more. There are studies that confirm the advantages offered by mobile applications accessible to people with disabilities during the trip (Hersh & Johnson 2008; González, 2013; Rios et al., 2012; Graham, 2013; Ribeiro et al., 2018; Strumillo 2010).

There are only two studies analyzed that look at websites and apps together (Fernández-Díaz et al., 2021, Lestari et al., 2019). In the case of the studies researched based on applications exclusively (without taking into account the web), it should be noted that there are only 3 representing 10.7% of the total publications evaluated in this study (Madeira et al., 2020; Mayordomo-Martinez et al, 2019; Ribeiro et al., 2018). In addition, social networks are another important medium as an online communication channel and there is only one study that contemplates it (Dinis et al., 2020).

In addition, work is already underway on a draft of the WCAG 3.0, which is more flexible in the face of new technological challenges, which indicates that the studies carried out are not aligned with the evolution of international regulations on accessibility at the time of analysis.

Proposition 3: The research methodology has to be adapted to the new tools and more complete forms of analysis.

On the methodology used in the results that were evaluated, it is observed that most of the studies are based on a methodology with automatic tools (Caldas et al., 2020; Domínguez Vila et al., 2018; Eusébio et al., 2020; Fernández-Díaz et al., 2021; Nadal & Mayol, 2011; Shi, 2006; Silveiro et al., 2019; Singh et al., 2020; Teixeira et al., 2021; Domínguez Vila et al., 2017); or inspection method (Dinis et al., 2020; Ferreira et al., 2020; García-Santiago & Olvera-Lobo, 2018; Kolodziejczak, 2019; Lestari et al., 2019; Mayordomo-Martinez et al, 2019; Ribeiro et al., 2018; Wu et al., 2014).

This type of analysis is important above all as a preliminary study of accessibility, in the case of automatic tools, or from the point of view of the expert, in the case of the inspection method. However, to more comprehensively complete compliance with digital accessibility on a website or app, for example, other types of studies are required that allow it to be evaluated taking into account the users themselves or their closest environment. Hence, it is recommended to combine inspection method with empirical methodologies (combination of methods), using only automated tools for preliminary analysis (Aizpurua et al., 2015).

In this way, the studies will have a more reliable result of accessibility compliance, since they involve the expert, the final public and rely on tools while checking it manually.

Proposition 4: Involve other stakeholders

For many years, PwD was one of the neglected market segments (Buhalis & Michopoulou, 2011; Figueiredo et al., 2012). However, it is a significant market segment for the tourism industry and very important for the economy (Dickson et al., 2016; Pagan, 2015; Pinho, 2015). Therefore, the concept of digital accessibility involves many different audiences within this tourism industry, not just people with disabilities.

According to Soler et al. (2019), only 1 out of three hotel managers know this concept and its importance. In addition, from the point of view of digital accessibility, 67% do not offer an accessible website to

their customers. From the point of view of institutions, García-Santiago and Olvera-Lobo (2018) suggest, “promoting an information campaign, aimed at any kind of entity responsible for disseminating World Heritage, about the need to adapt accessibility standards” (p. 33).

From the point of view of family and friends within the PwD environment, they are one of the main sources of information, apart from the internet (Domínguez, 2008). Hence, they are very important in projects on digital accessibility since they give their opinion from their own experience with PwD (Dattolo et al., 2016).

From the point of view of the 2030 agenda and Sustainable Development Goal 10, it is determined that there are still lack of studies on digital accessibility in the tourism sector focused on this area, since accessibility must not only be considered in the physical sphere, but also in the digital sphere, allowing access to digital content universally. According to Fernández-Díaz et al. (2023), in an analysis of the digital accessibility of European smart cities, it is determined that the analysis of the digital plane could provide important future practical implications that could complement the physical accessibility part of the cities in the tourism sector in compliance with the 2030 Agenda SDG 10.

Therefore, it is recommended to involve other stakeholders that are of interest, not only to obtain their opinion on the matter, but also so that they become aware of and can participate more actively in the area of digital accessibility.

6. Conclusion

This study aimed to understanding the digital accessibility in the tourism industry. Digital accessibility continues to be a challenge also within the tourism sector. There is a slight growth trend in the publication of studies in this area but the studies published in this industry related to digital accessibility are few.

Therefore, a SQLR process has been carried out through 28 articles that analyze the past and the present in this area, allowing us to develop the future research for 2030 agenda. For this we have based on a first descriptive analysis, authors, journals, affiliation, type of study, keywords and years of publication. This study found an increase in publications on this topic from 2019 and revealed the interdisciplinary nature of the digital accessibility concept, reflected on the diverse journals from different subject areas. This study also revealed that the theoretical framework relies mostly by researchers from Portugal and Spain countries. The results showed a balance between qualitative and quantitative studies, with a slight increase in quantitative ones, about all the inspection method type and through automatic tools (mainly with TAW and Access Monitor). Although the W3C updates the accessibility standards, the investigations continue using previous regulations WCAG 2.0, instead of WCAG 2.1. Among the main conclusions, it is highlighted that the studies show accessibility problems that must be solved, as well as important errors in the robust and perceptible principles. It is necessary to involve other audiences more to raise awareness about the importance of serving this segment in the tourism industry in the digital field. It is also shown that despite the passing of the years, studies on digital accessibility are mainly focused on the web part, and not so much on apps or other media. We are therefore faced with a digital challenge, since it is concluded that it continues to be ignored by many audiences, and despite the fact that it has been studied, the results reveal that its non-compliance is notorious.

Digital accessibility provides benefits not only to users who have a disability, but also to all users, for example, in the case in which they do not have a fast Internet connection, or they are elderly, and who have limited physical abilities. Therefore, these types of studies provide a deeper insight into the possibilities offered by this segment to the sector, thus raising awareness of its importance not only from an economic point of view, but also from a social inclusion point of view, complying with the Sustainable Development Goals (SDGs). Although the 2030 Agenda, SDG 11 and SDG 10 have raised awareness about the social importance of inclusion and sustainability within cities, it is determined that we still face a challenge in the field of digital accessibility. Similar conclusions were found by Rubio-Escuderos et al. (2021), Nitti (2018), Rucci et al. (2021) who could not show to what extent they are intelligent and accessible, but the results allow us to highlight the importance of convergence working along this line.

This study has not been exempting from some limitations, since within the initial search carried out in both databases, some of the articles selected by the abstract were not available in terms of the full paper, so they were eliminated from the analysis.

As a future line of research, the possibility of carrying out a bibliometric analysis that contemplates the evolution of the accessible tourism concept is proposed to determine its beginnings, and to be able to evaluate other aspects that do not focus only on digital accessibility, in a more detailed way and with a larger volume of data.

ACKNOWLEDGEMENTS

This paper is financed by National Funds provided by FCT- Foundation for Science and Technology through project UIDB/04020/2020 with DOI 10.54499/UIDB/04020/2020 and project UIDB/04470/2020 with DOI 10.54499/UIDP/04470/2020.

REFERENCES

- Aizpurua Aguirrezabal, A., Arrue, M., & Vigo, M. (2015). Prejudices, memories, expectations and confidence influence experienced accessibility on the Web. *Computers in Human Behavior*, 51a, 152-160. <https://doi.org/10.1016/j.chb.2015.04.035>
- Akgül, Y., & Vatansever, K. (2016). Web Accessibility Evaluation of Government Websites for People with Disabilities in Turkey. *Journal of Advanced Management Science*, 4(3), 201-210. <https://doi.org/10.12720/joams.4.3.201-210>
- Alexander, D. (2003). How accessible are Australian university web sites? In, *Proceedings of AusWeb03, ninth Australian World Wide Web conference*, 70-82.
- Baker, M. (1989). *Tourism for All: A report of the working party chaired by Mary Baker*. English Tourist Board in association with the Holiday Care Service, the Scottish Tourist Board, the Wales Tourist Board.
- Becker, S. A. (2004). E-government visual accessibility for older adult users. *Social Science Computer Review*, 22(1), 11-23. <https://doi.org/10.1177/0894439303259876>
- Bowtell, J. (2015). Assessing the value and market attractiveness of the accessible tourism industry in Europe: a focus on major travel and leisure companies. *Journal of Tourism Futures*, 1(3), 203-222. <https://doi.org/10.1108/JTF-03-2015-0012>
- Buhalis, D., & Darcy, S. (2010). *Accessible Tourism: Concepts and Issues*. Channel View Publications.
- Buhalis, D., & Michopoulou, E. (2011). Information-enabled tourism destination marketing: Addressing the accessibility market. *Current Issues in Tourism*, 14(2), 145-168. <https://doi.org/10.1080/13683501003653361>
- Caldas, M. I., Sampaio, H. A., Sousa, B. B., & Machado, H. A. (2020). The role of technology in monitoring good practices for Accessible Tourism in the city from Braga, Portugal. *RISTI - Revista Iberica de Sistemas e Tecnologias de Informação*, 309-320.
- Casais, B., & Castro, C. (2020). Online communication of accessibility conditions in touristic spots: the design-communication gap in Porto destination. *Journal of Hospitality and Tourism Technology*, 12(2), 196-209. <https://doi.org/10.1108/JHTT-07-2019-0096>
- Choi, S., Lehto, X. Y., & O'Leary, J. T. (2007). What does the consumer want from a DMO website? A study of US and Canadian tourists' perspectives. *International Journal of Tourism Research*, 9, 59-72. <https://doi.org/10.1002/jtr.594>
- DeMatos, N. M., Sampaio de Sá, E., & De Oliveira Duarte, P. A. (2021). A review and extension of the flow experience concept. Insights and directions for Tourism research. *Tourism Management Perspectives*, 38, 1-17. <https://doi.org/10.1016/j.tmp.2021.100802>
- Daniels, M. J., Rodgers, E. R., & Wiggins, B. P. (2005). Travel Tales': an interpretive analysis of constraints and negotiations to pleasure travel as experienced by persons with physical disabilities. *Tourism Management*, 26, 919-993. <https://doi.org/10.1016/j.tourman.2004.06.010>
- Darcy, S. (1998). *Anxiety to access: Tourism patterns and experiences of New South Wales people with a physical disability*. Tourism New South Wales.
- Darcy, S., & Dickson, T. J. (2009). A whole-of-life approach to tourism: the case for accessible tourism Experiences. *Journal of Hospitality and Tourism Management*, 16(1), 32-44. <https://doi.org/10.1375/jhtm.16.1.32>
- Datareportal (2022). *Digital 2022: Global Overview Report*. <https://datareportal.com/reports/digital-2022-global-overview-report>
- Dattolo, A., Luccio, F. L., & Pirone, E. (2016). Web accessibility recommendations for the design of tourism websites for people with autism spectrum disorders. *International Journal on Advances in Life Sciences*, 8(3), 297-308. http://www.iariajournals.org/life_sciences/

- Dickson, T. J., Darcy, S., Johns, R., & Pentifallo C. (2016). Inclusive by design: transformative services and sport-event accessibility. *The Service Industries Journal*, 36(11-12), 532-555. <https://doi.org/10.1080/02642069.2016.1255728>
- Dinis, M. G., Eusébio, C., & Breda, Z. (2020). Assessing social media accessibility: the case of the Rock in Rio Lisboa music festival. *International Journal of Event and Festival Management*, 11(1), 26-46. <https://doi.org/10.1108/IJEFM-02-2019-0012>
- Domínguez Vila, T. D., Gonzalez, E. A., & Darcy, S. (2017). Website accessibility in the tourism industry: an analysis of official national tourism organization websites around the world. *Disability and Rehabilitation*, 40(24), 1-13. <https://doi.org/10.1080/09638288.2017.1362709>
- Domínguez Vila, T., González, A., & Darcy, S. (2018). Accessible tourism online resources: a Northern European perspective. *Scandinavian Journal of Hospitality and Tourism*, 19(2), 140-156. <https://doi.org/10.1080/15022250.2018.1478325>
- Domínguez, T. (2008). *Marketing turístico para personas con discapacidad: El producto turístico accesible*. [Doctoral Dissertation, University of Vigo].
- Doolin, B., Burgess, L., & Cooper, J. (2002). Evaluating the use of the web for tourism marketing: A case study from New Zealand. *Tourism Management*, 23(5), 557-561. [https://doi.org/10.1016/S0261-5177\(02\)00014-6](https://doi.org/10.1016/S0261-5177(02)00014-6)
- Dwyer, L., & Darcy, S. (2011). Economic contribution of tourists with disabilities: an Australian approach and methodology. In Buhalis, D., Darcy, S. (Eds.), *Accessible Tourism: Concept and Issues* (pp. 213-239). Channel View Publications.
- Eusébio, C., Silveiro, A., & Teixeira, L. (2020). Website accessibility of travel agents: An evaluation using web diagnostic tools. *Journal of Accessibility and Design for All*, 10(2), 180-209.
- Fernández-Díaz, E., Correia, M. B., & de Matos, N. (2021). Portuguese and Spanish dmos' accessibility apps and websites. *Journal of Theoretical and Applied Electronic Commerce Research*, 16, 874-899. <https://doi.org/10.3390/jtaer16040050>
- Fernandez-Díaz, E., Jambrino-Maldonado, C., Iglesias-Sanchez, P. P., & de las Heras Pedrosa, C. (2023). Digital accessibility of smart cities-tourism for all and reducing inequalities: Tourism agenda 2030. *Tourism Review*, 78(2), 361-380. <https://doi.org/10.1108/TR-02-2022-0091/full/html>
- Ferreira, A. F., Akasaka, Y., Pinheiro, M. G. O., & Jason Chang, S. K. (2020). Information as the first attribute of accessibility: A method for assessing the information provided by urban rail systems to tourists with reduced mobility. *Sustainability*, 12(23), 10185. <https://doi.org/10.3390/su122310185>
- Figueiredo, E., Eusebio, C., & Kastenholz, E. (2012). How diverse are tourists with disabilities? A pilot study on accessible leisure tourism experiences in Portugal. *International Journal of Tourism Research*, 14(6), 531-550. <https://doi.org/10.1002/jtr.1913>
- García-Santiago, L., & Olvera-Lobo, M. D. (2018). Mexican World Heritage information on the web: Institutional presence and visibility. *Information Development*, 34(3), 261-279. <https://doi.org/10.1177/0266666917692388>
- García-Santiago, L., & Olvera-Lobo, M. D. (2021). How accessibility guidelines are used in Spanish World Heritage websites: an exploratory study. *Library Hi Tech*, 39(1), 144-165. <https://doi.org/10.1108/LHT-05-2019-0113>
- González, G. S. (2013). *Cómo hacer "Apps" accesibles*. CEAPAT, Madrid.
- Graham, I. (2013). Accessible tourism in Europe. [Paper presentation] *Conference on the Occasion of the European Day of Persons with Disabilities and European Tourism Day*, Bruxelles.
- Hersh, M., & Johnson, M. A. (2008). *Assistive technology for visually impaired and blind people*. Springer.
- Kabassi, K. (2017). Evaluating websites of museums: State of the art. *Journal of Cultural Heritage*, 24, 184-196. <https://doi.org/10.1016/j.culher.2016.10.016>
- Kolodziejczak, A. (2019). Information as a factor of the development of accessible tourism for people with disabilities. *Quaestiones Geographicae*, 38(2), 67-73. <https://doi.org/10.2478/quageo-2019-0014>
- Leitner, M.-L., Strauss, C., & Stummer, C. (2016). Web accessibility implementation in private sector organizations: motivations and business impact. *Universal Access in the Information Society*, 15(2), 249-260. <https://doi.org/10.1007/s10209-014-0380-1>
- Lestari, N. S., Wiastuti, R. D., & Triana, I. (2019). An overview of accessible Tourism information at Taman Mini Indonesia Indah Jakarta. *African Journal of Hospitality, Tourism and Leisure*, 8(4), 1-11. <http://eprints.binus.ac.id/id/eprint/36055>
- Li, X., & Wang, Y. (2011). Measuring the effectiveness of us official state tourism websites. *Journal of Vacation Marketing*, 17, 287-302. <http://dx.doi.org/10.1177/1356766711423436>
- Lopez de Ávila Muñoz, A., & García Sánchez, S. (2015). Destinos turísticos inteligentes. *Economía Industrial*, 395, 61-69. <https://dialnet.unirioja.es/servlet/articulo?codigo=5248689>
- Macedo, C., & Sousa, B. (2019). A acessibilidade no etourism: um estudo na ótica das pessoas portadoras de necessidades especiais. *PASOS. Revista de Turismo y Patrimonio Cultural*, 17(4), 709-723. <https://doi.ORG/10.25145/J.PASOS.2019.17.050>
- Madeira, S., Branco, F., Goncalves, R., Au-Yong-Oliveira, M., Moreira, F., & Martins, J. (2020). Accessibility of mobile applications for tourism-is equal access a reality? *Universal Access in the Information Society*, 20, 555-571.
- Mayordomo-Martinez, D., Sanchez-Aarnoutse, J. C., Carrillo-de-Gea, J. M., Garcia-Berna, J. A., Fernandez-Aleman, J. L., & Garcia-Mateos, G. (2019). Design and Development of a Mobile App for Accessible Beach Tourism Information for People with Disabilities. *International Journal of Environmental Research and Public Health*, 16(12), Article 2131. <https://doi.org/10.3390/ijerph16122131>

- Michopoulou, E., & Buhalis, D. (2013). Information provision for challenging markets: the case of the accessibility requiring market in the context of tourism. *Information and Management*, 50(5), 229-239. <https://doi.org/10.1016/j.im.2013.04.001>
- Michopoulou, E., Darcy, S., Ambrose, I., & Buhalis, D. (2015). Accessible tourism futures: the world we dream to live in and the opportunities we hope to have. *Journal of Tourism Futures*, 1(3), 179-188. <https://doi.org/10.1108/JTF-08-2015-0043>
- Moher, D., Shamseer, L., Clarke, M., Ghersi, D., Liberati, A., Petticrew, M., ... (2015). Preferred reporting items for systematic review and meta-analysis protocols (PRISMA-P) statement. *Systematic Reviews*, 4(1), 1-9. <https://doi.org/10.1136/bmj.g7647>
- Nadal, G. F., & Mayol, J. J. (2011). Importance and current status of web accessibility for accessible tourism. *PASOS-Revista de Turismo y Patrimonio Cultural*, 9(2), 317-326. <https://doi.org/10.25145/j.pasos.2011.09.028>
- Nitti, M. (2018). Using IoT for accessible tourism in smart cities. In Daniele, G. (Ed.), Massimo Di Francesco (Tran.), *Assistive Technologies in Smart Cities*, IntechOpen, Rijeka.
- Özogul, G., & Baran, G. G. (2016). Accessible tourism: The golden key in the future for the specialized travel agencies. *Journal of Tourism Futures*, 2, 79-87. <https://doi.org/10.1108/JTF-03-2015-0005>
- Pagan, R. (2015). The contribution of holiday trips to life satisfaction: The case of people with disabilities. *Current Issues in Tourism*, 18, 524-538. <https://doi.org/10.1080/13683500.2013.860086>
- Pinho, S. (2015). Turismo Acessível: Oportunidades e Desafios para as unidades hoteleiras de Portugal. [Thesis, University of Aveiro].
- Poole, N. (2001). Approaches to web accessibility. *VINE*, 31(3), 12-16. <https://doi.org/10.1108/03055720010804096>
- Porto, N., Rucci, A. C., Darcy, S., Garbero, N., & Almond, B. (2019). Critical elements in accessible tourism for destination competitiveness and comparison: Principal component analysis from Oceania and South America. *Tourism Management*, 75, 169-185. <https://doi.org/10.1016/j.tourman.2019.04.012>
- Ribeiro, F. R., Silva, A., Barbosa, F., Silva, A. P., & Metrôlho, J. C. (2018). Mobile applications for accessible tourism: overview, challenges and a proposed platform. *Information Technology and Tourism*, 19, 29-59. <https://doi.org/10.1007/s40558-018-0110-2>
- Rios, R., Garcia, E., Garcia-Cabot, A., de Marcos, L., Oton, S., Gutiérrez, R. B., & Magen, J. (2012). Accesibilidad en Smart-phones para el acceso a contenidos e-learning. In Martínez, L. B., González, J. R. H. (Eds.), *III Congreso Iberoamericano sobre Calidad y Accesibilidad de la Formación Virtual* (3rd ed., pp. 1-8). Servicio de Publicaciones, Espanha.
- Rubio-Escuderos, L., García-Andreu, H., Michopoulou, E., & Buhalis, D. (2021). Perspectives on experiences of tourists with disabilities: implications for their daily lives and for the tourist industry. *Tourism Recreation Research*, 1-15. <https://doi.org/10.1080/02508281.2021.1981071>
- Rucci, A. C., Porto, N., Darcy, S., & Becka, L. (2021). Smart and Accessible Cities?: Not Always – The Case for Accessible Tourism Initiatives in Buenos Aires and Sydney. In C. Eusébio, L. Teixeira, & M. Carneiro (Eds.), *ICT Tools and Applications for Accessible Tourism* (pp. 115-145). IGI Global. <https://doi.org/10.4018/978-1-7998-6428-8.ch006>
- Saraiva, L. (2017). *O Turismo acessível e as empresas de animação turística em Portugal Continental* [Thesis for Master, University of Aveiro].
- Schieder, T., Adukaite, A., & Cantoni, L. (2014). Mobile apps devoted to UNESCO World Heritage sites: a map. In *Proceedings of the International Conference in Dublin Information and Communication Technologies in Tourism*, Dublin, Ireland, 21-24 January (pp. 17- 29). Springer. https://doi.org/10.1007/978-3-319-03973-2_1
- Serrano, E. (2009). Herramientas para la evaluación de la accesibilidad Web. *Documentación de las Ciencias de la Información*, 32, 245-266. Universidad de Alcalá. <https://revistas.ucm.es/index.php/DCIN/article/view/DCIN0909110245A/18823>
- Shi, Y. (2006). The accessibility of Queensland visitor information centres' websites. *Tourism Management*, 27(5), 829-841. <https://doi.org/10.1016/j.tourman.2005.05.012>
- Silveiro, A., Eusébio, C., & Teixeira, L. (2019). Heterogeneity in accessibility of travel agency websites: A study in the central Portugal region. *RISTI - Revista Iberica de Sistemas e Tecnologias de Informacao*, 35, 18-34. <https://doi.org/10.17013/risti.35.18-34>
- Singh, R., Ismail, A., Sibi, P. S., & Singh, D. (2020). Compliance of accessibility in tourism websites: a pledge towards disability. *Journal of Hospitality and Tourism Insights*, 4(3), 263-281. <https://doi.org/10.1108/JHTI-05-2020-0092>
- Soler, J. A. C., Diaz, M. B., Vera, P. S., & Guillen, D. R. (2019). Manager's knowledge and awareness towards accessible tourism in the region of murcia. *Gran Tour: Revista de Investigaciones Turísticas*, 20, 109-126.
- Statcounter Globalstats (2023). *Desktop vs Mobile vs Tablet Market Share Worldwide*. Retrieved 25 August 2023.
- Strumillo, P. (2010). Electronic interfaces aiding the visually impaired in environmental access, mobility and navigation. In *3rd International Conference on Human System Interaction*. <https://doi.org/10.1109/HSI.2010.5514595>
- Takeda, K., & Card, J. A. (2002). U.S. Tour Operators and Travel Agencies: Barriers Encountered When Providing Package Tours to People Who Have Difficulty Walking. *Journal of Travel & Tourism Marketing*, 12(1), 47-61. https://doi.org/10.1300/J073v12n01_03

- Teixeira, P., Eusébio, C., & Teixeira, L. (2021). How diverse is hotel website accessibility? A study in the central region of Portugal using web diagnostic tools. *Tourism and Hospitality Research*, 1-16. <https://doi.org/10.1177/14673584211022797>
- United Nations Development Programme (2021). *The SDGS in Action*. <https://bit.ly/3DDqgaZ>.
- Williams, R., & Rattray, R. (2005). UK and US hotel web content accessibility: Mandates for action. *International Journal of Contemporary Hospitality Management*, 17(1), 78-87. <https://doi.org/10.1108/09596110510577699>
- Witt, N., & McDermott, A. (2005). Web site accessibility: What logo will we use today? *British Journal of Educational Technology*, 36(6), 45-56. <https://doi.org/10.1111/j.1467-8535.2004.00367.x>
- World Health Organization (2011). *World report on disability – Summary*. *World report on disability*. www.who.int/disabilities/world_report/2011/report.pdf
- World Health Organization (2024). *Assistive Technology*. <https://www.who.int/es/news-room/fact-sheets/detail/assistive-technology>
- World Wide Web Consortium. (Aug. 1997). *World Wide Web Consortium Launches International Program Office for Web Accessibility Initiative*. <https://www.w3.org/Press/IPO-announce>
- World Wide Web Consortium (2024). *Introduction to Web Accessibility*. <https://www.w3.org/WAI/fundamentals/accessibility-intro/>
- Wu, Y.-C. J., Chang, C.-L., & Hsieh, Y.-J. (2014). Enhancing learning experience of the disabled: An accessible tourism platform. *Journal of Universal Computer Science*, 20(15), 2080-2095. <https://doi.org/10.3217/jucs-020-15-2080>
- Zajadacz, A. (2014). Sources of tourist information used by Deaf people. Case study: the Polish Deaf community. *Current Issues in Tourism*, 17(5), 434-454. <https://doi.org/10.1080/13683500.2012.725713>

ORCID

Elena Fernández-Díaz  <https://orcid.org/0000-0002-0884-5484>

Nelson de Matos  <https://orcid.org/0000-0002-6263-5007>

Marisol B. Correia  <https://orcid.org/0000-0002-1788-6114>

Notes on contributors

Elena Fernández-Díaz, University of Málaga; Spain. Ph.D in Advertising and Public Relations from University of Málaga, Spain. Her main lines of research are digital accessibility, digital marketing, social networks and online reputation. From 2016 to 2018, she reconciled her professional career in an advertising agency as Account Director with her teaching and researching labour. From October 2018 to present, she is full-time teacher in University of Málaga. She has published several scientific articles in journals and is reviewer of international journals and conferences. She is a researcher in the research group of the Junta de Andalucía entitled “Open Communication in Women’s Startups. Competitive strategies for differentiation and innovation”.

Nelson de Matos, Universidade do Algarve & Research Centre for Tourism, Sustainability and Well-being - CinTurs & Centre for Tourism Research, Development and Innovation. – CiTUR; Portugal. He is a post-doc researcher and invited assistant professor of Marketing at the University of Algarve, responsible for several course units in Marketing and Tourism. He holds a doctoral degree in Tourism from the same university and is an integrated member of CinTurs Research Center. He has held various marketing management roles for nearly two decades in the hospitality and services industry and has participated in various business projects as director, manager, but also as marketing consultant and trainer. He has authored publications in journals, books, and conference proceedings. His research interests are mainly consumer behavior.

Marisol B. Correia, ESGHT, Universidade do Algarve & Centre for Tourism Research, Development and Innovation – CiTUR & Research Centre for Tourism, Sustainability and Well-being - CinTurs & CEG-IST, Instituto Superior Técnico, Universidade de Lisboa; Portugal. She is Coordinating Professor at the School of Management, Hospitality and Tourism of the University of the Algarve. She is an integrated member of CiTUR Algarve (Centre for Tourism Research, Development and Innovation-Algarve), a member-collaborator of CinTurs (Research Centre for Tourism, Sustainability and Well-being) and is an external research fellow of the CEG-IST (Centre for Management Studies). She holds a PhD in Electronics and Computer Engineering. Her current research interests include business intelligence, data science, e-tourism and ICT. She has published several scientific articles in journals, has participated in funded projects and is reviewer of international journals and conferences.

Appendix A. Review protocol of inclusion/exclusion criteria or articles and their justification

Inclusion criteria	Exclusion criteria	Main justification
Studies that analyse digital accessibility in tourism context	Studies not analysing digital accessibility in tourism context (e.g., physical spaces)	Identify what type of analysis methodologies are applied within digital accessibility, type of media analyzed and determine the main trends and digital gaps in the tourism area.
Studies based on:	Opinion articles	To obtain conclusions on real practical cases applied to analyzes carried out within the tourism sector.
Theoretical research		
Methods Empirical (quantitative and qualitative research)		
Peer-reviewed journal articles	Books, book chapters, dissertations, research reports, conference proceedings, discussion paper, website documents, media articles and other non-research or peer-reviewed documents	To obtain studies with greater reliability and validity by peer review. Other documents were excluded due to the enormous volume of studies as well as articles from the media and other non-research documents.
Studies published at any time	None	The research seeks to identify research avenues, without any constraints regarding the date of publication.
Studies located in national and international databases	None	The location has not been excluded to have a more complete volume of studies.
Studies written in English, Spanish and Portuguese	Studies not written in English, Spanish and Portuguese	English is the most used language in academia, and Spanish and Portuguese are the native languages of the researchers in this article. In this way, a more exhaustive analysis can be carried out.
Studies focused on Social Sciences, Business, Management and Accounting, Psychology and Computer Science	Studies focused on other scientific areas	Other areas of analysis have been excluded since such a volume of articles makes the review process difficult. Furthermore, taking into account the subject matter analyzed, the main areas of study within digital accessibility and tourism have been taken into account.

Source: Own Elaboration based on Da Silva de Matos et al. (2021)

Overtourism in Uzungöl Trabzon, Türkiye: A Study Based on Tourist Reviews

Melik Onur Güzel ¹

Eşref Ay ²

Ozan Çatır ³

1. Anadolu University, Tourism Faculty, Eskişehir, Türkiye

2. Graduate School of Social Sciences, Anadolu University, Eskişehir, Turkey

3. Uşak University Ulubey Vocational School, Tourism and Travel Services Department, Uşak, Türkiye

ABSTRACT

Uzungöl is a popular natural route and a major tourist attraction in Turkey, but recently overtourism has become a major problem. With the increase in the number of visitors, rapid construction, concreting and various forms of pollution have had a negative impact on the destination of Uzungöl and its environment. The aim of this study is to reveal the evidence for the existence of overtourism in Uzungöl through visitors' reviews on online platforms and to determine in which areas overtourism is effective. In this study, which was conducted using an exploratory approach, it was observed that many visitors reviewed on overtourism in Uzungöl using TripAdvisor. These reviews were analysed using content analysis. As a result of the analysis, it was found that visitors' reviews focused on three themes related to overtourism in Uzungöl. These are environmental, economic, and socio-cultural themes. As a result of the study, it was determined that environmental concerns are more prominent in terms of overtourism. In addition, it was understood that tourists visiting the region have a negative image in terms of overbuilding, concretisation, and unplanned urbanisation.

KEYWORDS

Overtourism, TripAdvisor, Online reviews, Qualitative Analysis, Uzungöl Trabzon, Türkiye.

ARTICLE HISTORY

Received 24 December 2023 Accepted 29 September 2024

1. Introduction

In the last quarter-century, despite fluctuations due to economic crises, wars, and pandemics worldwide, the tourism industry has continued to grow (UNWTO, 2022). It is a fact that within this growth there are destinations that are trying to increase the number of tourists and destinations that are trying to find solutions to the problems that arise from the arrival of more tourists. However, it is well-known that the number of the latter type of destinations is increasing day by day. The rapid growth in these areas and the resulting issue of overcrowding threatening the local economy and housing options have highlighted the necessity of controlling this growth (Croes, Rivera, Semrad, & Khalizadeh, 2017). The concept of overtourism has emerged in this context, and it has been increasingly used in both contemporary media and academic literature concerning the management of the current growth in popular tourist destinations and the sustainability of the region. Overtourism particularly affects European cities (Seraphin, Sheeran, & Pilato, 2018; Alonso-Almeida, Borrajo-Millán, & Liu, 2019; Adie, Falk, & Savioli, 2020; Sequera & Nofre, 2020; Díaz-Parra & Jover, 2021), North American cities (Weforum, 2017; Khomsi, Fernandez-Aubin, & Rabiner, 2020), and Asian cities (Weforum, 2017; Hess, 2019; Loverio, Chen, & Shen, 2021) negatively. It is well-known that major urban tourism destinations are facing this issue. So, what needs to be done to solve the problems of overtourism that can arise in small-scale centres of natural attraction in rural areas? This study explores these questions in the Uzungöl region of Trabzon province, located in northern Turkey, which is an important tourism center with natural attractions.

The news about the ecotourism region of Uzungöl, which is the target region within the scope of this research, has taken place in the public. In this direction, in addition to the number of tourists exceeding 625 thousand in 2019 in the region, it has become necessary to conduct research due to the perception that the balance between economic, socio-cultural and environmental dimensions has deteriorated despite the evolution of tourism. Due to the emergence of problems such as increasing overcrowding, overbuilding, destruction of nature, costly and cultural degradation with unplanned urbanisation in the region due to the evolution of tourism in Uzungöl, it was considered to use the opinions of visitors to the region as data. A review of the literature shows that there are studies on the data obtained from Tripadvisor and other similar applications, which is the source from which the data is taken, and studies on the analysis of highly visited points or visitor ratings. However, it is recognised that there are limited studies that evaluate visitor reviews on tourism evolution (Moreno-Gil & Coca-Stefaniak, 2020; Martin-Fuentes, Nieto Ferrando, Marine-Roig, & Ferrer-Rosell, 2020; Hidalgo-Giralt, Palacios-García, Barrado-Timón, & Rodríguez-Esteban, 2021; Ganzaroli, De Noni, & Bonera, 2021; Rozmiarek, Malchrowicz-Moško, & Kazimierczak, 2022). Although stakeholders' and local people's opinions on the impact of tourism, overtourism and sustainable tourism on Uzungöl, which is the study area (Alptekin, 2017; Küçükaşçı, 2019; Kılıç, 2020; Mutlu, 2021; Güzel & Çakır, 2023a), there is no study that considers the views of tourists coming to the region about Uzungöl and the level of evolution of tourism in the region. Especially in the tourism literature, despite the popularity of the destination image concept, there are very few studies that focus on tourists' reviews regarding destinations. It was considered necessary to evaluate the opinions of visitors to the region in order to increase the satisfaction of tourists coming to Uzungöl, which is a small region, to ensure sustainable management and to identify and eliminate problems that may arise.

In this regard, this study aims to identify evidence of overtourism in Uzungöl based on visitor reviews and determine the areas where overtourism is effective. Accordingly, tourist reviews on TripAdvisor regarding Uzungöl and tourism in the region were analyzed, and reviews that could be related to overtourism were examined and analyzed. Based on the findings, conclusions were drawn, and an assessment of the dimensions of overtourism in the Uzungöl destination was made. Considering the outcome of the evaluation, it is believed that this study contributes to the field by qualitatively analyzing visitor reviews. Furthermore, recommendations are made for local governments and other tourism stakeholders regarding the establishment of sustainable tourism management for Uzungöl and similar destinations, aiming to provide practical contributions. Within the scope of the research, answers to the following questions were sought:

- What are the views of visitors to Uzungöl on overtourism?
- What are the prominent dimensions of overtourism in Uzungöl?
- What are the methods to reduce the problems caused by overtourism in Uzungöl?

2. Literature Review

2.1 Overtourism

Overtourism is a complex and challenging phenomenon that has garnered academic interest in the last fifteen years. It refers to excessive pressure on both the infrastructure and natural environment, as well as the socio-cultural environment, due to tourism. Overtourism leads to environmental degradation and negative impacts on the tourist experience, including alienation between the local population and tourists (Mihalic & Kušcer, 2022). In essence, overtourism signifies the unsustainability of tourism (Mihalic, 2020). Excessive tourist traffic results in aggressive commercialization that disrupts natural and cultural resources. Furthermore, overcrowding in tourist destinations diminishes the aesthetic quality of the tourist experience (Szromek, Kruczek, & Walas, 2020).

The development of the concept in the literature is guided by four key books. Firstly, Young (1973) anticipated the serious social, environmental, and economic risks for destinations if tourism growth does not occur in a planned manner. In this context, he emphasized the importance of tourism policies that minimize the harms of overtourism. Subsequently, Turner and Ash (1975), Haulot (1974), and Krippendorf (1975) argued that uncontrolled growth in tourism would reach dimensions that destinations could not sustain, leading to depletion of environmental resources and land. Recent developments in mass tourism further validate the arguments made by these researchers.

The evolution and utilization of certain resources in destinations are often planned for tourism purposes. However, tourists often become unplanned users of these resources (Hall, 2009). Butler (2018) noted that the concept of overtourism is less about tourists and more about expressing social injustice and widespread stress for the local population in a destination. However, according to Pearce (2018), if the dissatisfaction of the local population reaches its limit and turns into direct aggression, it will not only affect the region's residents and businesses but ultimately the tourists themselves. The presence of a large number of tourists in a destination does not necessarily imply the existence of overtourism (Żemła, 2020). It is possible to say that destinations with a high number of visitors and no overtourism issues have a planned visitor management system and sufficient hosting capacities (Genç & Türkay, 2022).

2.2 Economic, Socio-cultural and Environmental Consequences of Overtourism

Urbanisation, globalisation, migration, digitalisation, the environment and even people's sense of place and identity are all pressing issues that need to be addressed and are all linked to the growth of tourism. Cities are complex places where these issues converge, where global trends meet local character. While tourism can help cities become more outward-looking, hospitable, and prosperous, it should be recognised that this process is not automatic and does not always benefit everyone equally. Tourism in some European cities has become highly unbalanced, with limited infrastructure, high demand for tourist attractions and sharp peaks at certain times of the year (Jordan, Pastras, & Psarros, 2018). Depending on the number of people who can afford to travel, more and more tourists and special groups of tourists have emerged in tourism. In this direction, there has been an international tourism boom in the Chinese and Indian markets. This increasing demand has led to the neglect of social and environmental sustainability in Asian destinations (Dodds & Butler, 2019a). Indeed, countries, regions and cities are still heavily promoted at the national and often regional level, and even at the municipal level. Global economic growth has increased the potential number of tourists, while technological advances have enabled more people to travel widely (Dodds & Butler, 2019b). Looking at the last decade, the number of international tourists has increased from 25 million in 1950 to over 1.3 billion in 2017. The UNWTO estimates that the sector will continue to grow at 3.3 per cent annually until 2030, when 1.8 billion tourists will cross borders. These emerging situations are fuelling overtourism, which it is estimated will be difficult to control if the same policies continue (UNWTO, 2018).

With traditional policies focusing on increasing volumes, it has become possible to see signs of overtourism in various destinations around the world (Peeters et al., 2018). Overtourism demand at the international level has manifested itself in rural areas as well as in world-famous metropolises (Drápela, 2023). While the increasing number of tourists and tourism activities in rural areas leads to unplanned

construction and uncontrolled growth in these areas (Barakazi, 2023), it can also cause social, psychological and health problems for the people in the region (Ghaderi et al., 2022). On the other hand, there may be resistance to tourism in society and negative situations such as traffic congestion and destruction of nature may occur in the region (Drápela, 2023). UNWTO (2018) defines the carrying capacity of tourism as “the maximum number of people who can visit a tourist destination at the same time without causing damage to the physical, economic and socio-cultural environment and without causing an unacceptable reduction in the quality of visitor satisfaction”. As can be seen, overtourism that exceeds capacity can cause economic, socio-cultural and environmental problems in destinations and in the societies that are part of destinations. Looking at the dimensions in more detail, it can be seen that due to overtourism, the number of short-term stays in destinations increases economically (Veríssimo et al., 2020), land and house prices increase, the understanding of tourism increases the prices of services and products (Martín et al., 2018), overdependence on the tourism sector due to seasonality (Cheer et al., 2019) and negatively affects other sectors, and high prices create a negative image among tourists (Peeters et al., 2018). The social and cultural problems of overtourism can be diverse and variable. Destinations may experience socio-cultural problems such as touristification of settlements, marginalisation of residents, crime, loss of cultural identity (Seyhan, 2023) and cultural shock (Namberger et al., 2019), social conflicts between different interest groups (Jamal & Getz, 1999), and reduced quality of life (Kuščer & Mihalič, 2019). Other problems that may arise as a result of overtourism relate to environmental goods. Problems that may arise in the environmental dimension are mainly the result of increased use (Peeters et al., 2018). In this context, increased use of natural resources (soil, water, energy), investments in tourism infrastructure, degradation of the natural and cultural landscape (Seyhan, 2023), threats to local species and geological areas, greenhouse gas emissions and air pollution (Veríssimo et al., 2020), congestion and overcrowding (Peeters et al., 2018; Jacobsen et al., 2019), deterioration of urban safety and cleanliness (Kuščer & Mihalič, 2019; Veríssimo et al., 2020), land use issues (Sarantakou & Terkenli, 2019) are the environmental problems that can occur in tourist destinations.

So, how does sustainable tourism management work to reduce and control the problems caused by overtourism in rural destinations? In parallel with the evolution of tourism in rural areas, it can be said that although it is an important factor in the evolution of rural areas due to its positive social and cultural effects with the interaction between local people and tourists, as well as providing economic returns in the region (Eusébio et al., 2014), it is inevitable to face all kinds of costs caused by overtourism. In this regard, D'Mello et al. (2016) suggest that research should be conducted on stakeholder cooperation and participation as a key to sustainable tourism development in rural destinations. Especially in rural areas, evolution that ignores the local community should not be expected to be successful (Güzel & Çakır, 2023b). In fact, it is stated that the chances of success of sustainable rural tourism will be higher if all stakeholders in the rural area where tourism activities will be developed are willing to actively participate in sustainability initiatives. According to this understanding, which is called community-based tourism, it includes all interactions between local people and external stakeholders (Widawski et al., 2023).

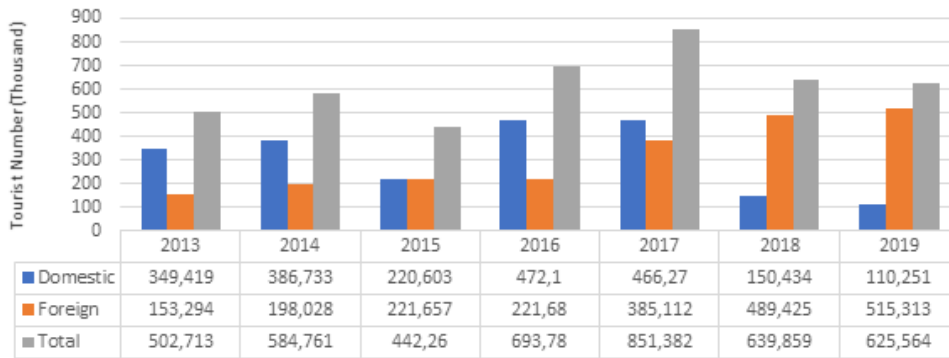
3. Methodology

3.1 Research Site: Uzungöl, Trabzon, Turkey

Uzungöl, an important tourism destination in Turkey, was selected as the sample for this study. The reason for choosing this destination is its status as an ecotourism region that hosts a significant number of tourists despite its limited geographical area. When examining the number of tourists in Uzungöl, it can be observed that the number increased from 51,464 in 1996 to 346,554 in 2000. In other words, the number of tourists increased sevenfold between 1996 and 2000. The majority of these tourists are domestic tourists (Yeşilyurt, 2002). When Figure 1 is analysed, it is seen that the total number of tourists peaked in 2017 and reached 851,382. However, this number decreased in 2018 and 2019. This decrease seems to be due to the decreasing interest of domestic tourists. Because there is no significant decrease in the number of foreign tourists in this period. Based on these data, it can be said that Uzungöl's popularity

for domestic tourists has decreased after 2016, but it has maintained or increased its popularity among foreign tourists. Fluctuations in the number of foreign tourists may be related to international tourism trends or changes in Turkey's tourism policies in certain years. The reasons for this decrease in the number of domestic tourists may be worth investigating; this may be related to economic factors, changes in local tourism policies, marketing efforts or changes in the attractiveness of the region.

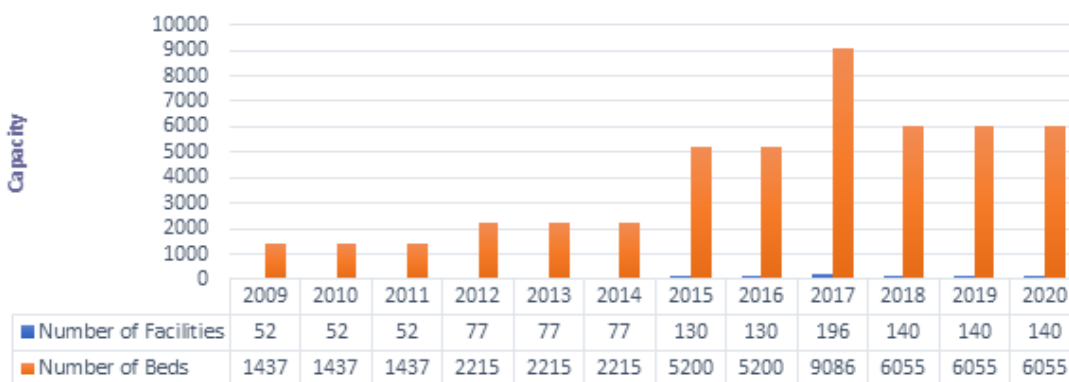
Figure 1. Tourist Numbers in Uzungöl between 2013-2019



Source: Trabzon Provincial Directorate of Culture and Tourism, 2020

When observing Figure 2, it can be seen that Uzungöl's accommodation capacity has increased significantly in the last ten years, with the number of facilities increasing by nearly three times and the number of beds by more than four times. The number of establishments shows a continuous increase from 2009 to 2020. This increase shows that tourism is developing in the region and investment is increasing. The number of beds increased sharply in 2015 and peaked at 9 086 in 2017. However, after this peak, the number of beds fell sharply in 2018 and beyond. This may indicate an exceptional situation in 2017, or perhaps a saturation point in tourism. After the decline in 2018, the number of beds remained stable until 2020. This suggests that the region may have decided to operate at a certain capacity or that the market has stabilised. While the number of establishments is increasing, there are fluctuations in bed capacity. This may indicate that there is diversity in the size of existing facilities and the types of services they offer, or that facilities have changed their capacity in certain years.

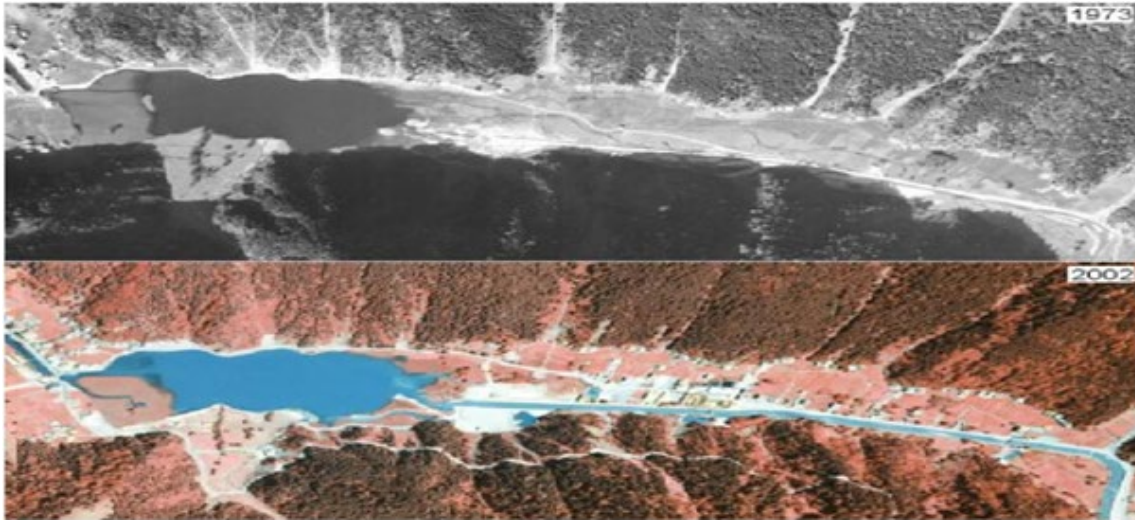
Figure 2. Uzungöl Accommodation Capacity between 2009-2020



Source: Trabzon Provincial Directorate of Culture and Tourism, 2020

When examining Image 1 and Image 2, it is apparent that Uzungöl, which appeared natural and less developed in the 1970s, saw some evolution in the 2000s. However, in the 2020s, it is clear that there has been significant evolution around the lake and the river that feeds it, resulting in a concrete appearance and a negative visual impact.

Image 1. Temporal Changes in Uzungöl between 1973 and 2002



Source: Atasoy, 2010

Image 2. A Bird's Eye View of Uzungöl in 2023



Source: Google, 2023

After determining the Uzungöl example, the Uzungöl destination was selected on the TripAdvisor website. Overtourism reviews were examined based on the selected keywords, and 516 reviews were categorized according to factors.

3.2 Research Design

This study adopts a qualitative exploratory approach to identify tourists' experiences of overtourism. The research follows a cross-sectional design and is based on data collected over a period of time (2010-2023). This approach is a method frequently used in the social sciences and allows for reliable results (Creswell, 2013).

3.3 Data Collection

The data collection process was carried out on a major travel site such as TripAdvisor. This platform allows users to review on their travel experiences. The reviews were collected between January and April 2023. The researchers selected 516 user reviews about the Uzungöl region of Trabzon for analysis.

3.4 Content Analysis

Content analysis was carried out using the thematic analysis methods proposed by Braun & Clarke (2006). This method allows for in-depth analysis of the data and systematic identification of themes. The content analysis process was carried out in two stages: a. Pre-coding: The researchers identified the reviews related to overtourism using the keywords obtained from the literature review. At this stage, statements were distinguished according to the dimensions of overtourism. b. Theme evolution: The statements identified in the first stage were grouped into broader categories. This categorisation was supported by discussions among the researchers, which increased the reliability and validity of the themes and concepts that emerged from the data (Saldaña, 2015).

3.5 Inter-Researcher Reliability

To ensure the reliability of the research process, the data were coded and analysed by three independent researchers. The researchers were in constant communication during the coding and theme development process and discussed any disagreements until consensus was reached (Krippendorff, 2004). This process aimed to increase the objectivity of the study and the reliability of the findings.

4. Findings

4.1 Descriptive Findings of Visitors

Table 1 presents descriptive statistics related to visitor reviews. When examining Table 1, it can be observed that reviews are predominantly in Turkish (71.5%), followed by English (18.8%) and Arabic (6.2%). It was found that 37.7% of visitors found the Uzungöl destination excellent, while 13.5% found it terrible. The majority of visitors appear to be families (45%), followed by couples (26.8%) and friends (24.1%) who visited the destination.

Table 1. Descriptive Statistics for Visitor Reviews

Languages	n	%
Turkish	370	71.7
English	97	18.8
Arabic	32	6.2
German	7	1.4
French	2	0.4
Russian	5	1.0
Portuguese	1	0.2
Dutch	1	0.2
Hebrew	1	0.2
Total	516	
Evaluation	n	%
Excellent	195	37.7
Very Good	120	23.2
Average	87	16.8
Poor	44	8.53
Terrible	70	13.5
Total	516	

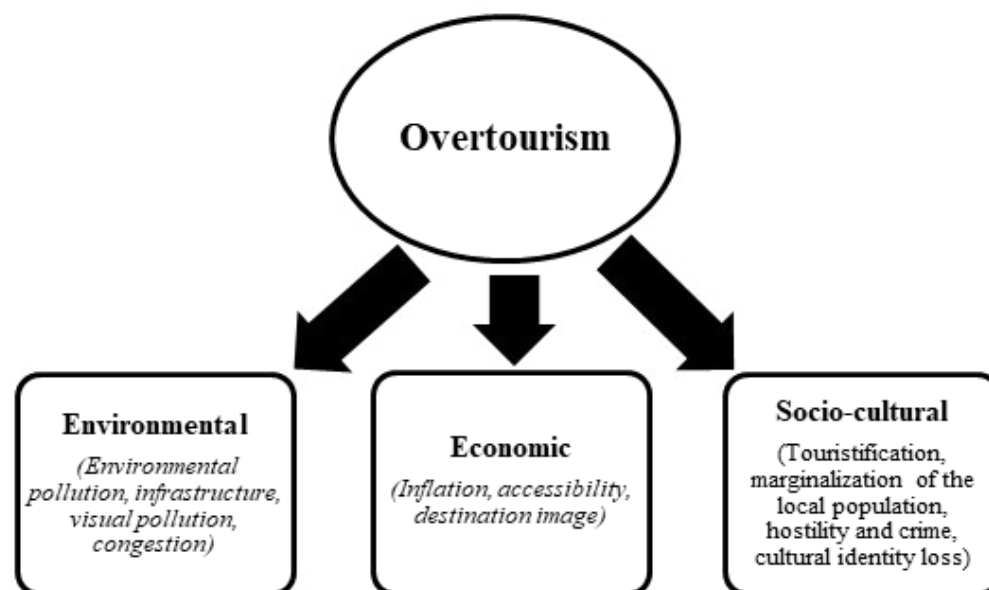
Type of Visit	n	%
Business	7	2.1
Couples	91	26.8
Family	153	45.0
Friends	82	24.1
Solo	7	2.1
Total	340	

Source: Own Elaboration

4.2 Results Regarding the Dimensions of Overtourism

According to the literature review, there are three dimensions of overtourism in tourism studies (Peeters et al., 2018). These dimensions are environmental, economic, and socio-cultural. These three dimensions were used as coding and analytical framework. The unit of analysis consists of sentences extracted from explanations related to overtourism. Researchers then clustered the sentences using qualitative analysis. The results of content analysis are summarized in Figure 3. Here is a detailed discussion of some of the key findings:

Figure 3. Dimensions of Overtourism and Key Terms



Source: Peeters et al., 2018

4.2.1 Findings Regarding the Analysis of Tourists' Overtourism Reviews in Environmental Dimension

Within the scope of the research, the frequency of tourists' reviews related to the "Environmental" dimension is as follows:

Table 2. Codes and Frequencies of Tourists' Environmental Dimension in Uzungöl

Environmental Dimension	Frequencies
Visual Pollution	18
Congestion	16
Environmental Pollution	12
Infrastructure	4
Total	50

Source: Own Elaboration

Based on the data in Table 2, tourists' reviews about Uzungöl on TripAdvisor provide important indicators of the environmental dimensions of overtourism. For example, one tourist said: *'The view is of course wonderful, but unfortunately this place has also had its share of concrete piles and its naturalness has been damaged. You have a wonderful view of the lake from the viewing platform, but when you look around you see a lot of hotels, cafes, shops and you can't help but wish it had stayed natural, and of course it's full of Arabs again'*. In another review, *'I've been to Uzungöl before, but this time I was very disappointed. If anyone has not seen it, I would say you should definitely see it. Because in a few years it will be gone because of the absurd constructions that have been made for the greed of making money'*. The statements suggest that the construction is causing environmental damage, and that this situation is negatively affecting the tourist experience. Finally, another tourist said: *'It's totally disappointing. When a magnificent nature was touched by unconscious people, a shameful landscape was created. You go to see some nature, to breathe, but there are buildings and concrete everywhere. I definitely do not recommend it'*, criticises the destructive effect of overdevelopment on natural beauty. These reviews clearly reveal the environmental dimensions of overtourism in Uzungöl and the impact of this situation on tourists' perceptions.

When the tourist experiences in Uzungöl are analysed, it is seen that congestion and density create environmental negativities. A tourist said, *'We went there to spend 4 nights with the family by the lake. 50 minutes of traffic congestion to enter the city from the only access road. And this is the case for every entry and exit to and from the city, no matter what time of the day. It's a very touristy place so we overlap. For lunch... if we are patient... we have to wait for the tables to empty. Tourists are disrespectful to the places and the inhabitants. Suddenly, an hour after we arrived, we used an excuse to change places completely. It's a pity because it's a really nice place but you should go there out of season. Mass tourism is just fear.'* indicates that congestion negatively affects the tourist experience. Furthermore, another tourist reviewed: *'It is very good but there are too many visitors. I think it is crowded like in Venice.'* shows that the crowds make Uzungöl less attractive for visitors. Finally, *'Uzungöl has become a place with an incredible number of Arabs. There are hotels everywhere and it is very crowded.'* also emphasises the impact of the concentration in the region on its diversity and quality. These reviews clearly reveal the environmental dimensions of overtourism in Uzungöl and its effects on tourist perceptions.

Tourist reviews in Uzungöl show that environmental pollution and infrastructure deficiencies pose serious environmental problems. The review of a tourist, *'It is a wonder of nature, it is very badly consumed, the environment is dirty, the lake is polluted, it receives a significant number of tourists from the Middle East, it should be seen before it gets worse'* emphasises that the natural beauty of the region has been damaged, and this situation has been noticed by tourists. Another review, *'Our citizen have done what they would do again. They managed to ruin that beautiful natural wonder. Everywhere there is construction, everywhere there are businesses, everywhere there is rubbish and filth. The wastewater of the businesses flows into the lake. They have destroyed the naturalness of the lake'* expressions point to the negative effects of construction and waste management problems on the environment. A third review criticises the inadequacies in infrastructure and service quality, *'Uzungöl has changed compared to the past, the prices are very expensive, the noise of motorbikes and restaurants is very loud and expensive, all the streets are full of garbage and the walking path around the lake is narrow, they do not have a system to pull.'* Finally, the review *'The nature is very beautiful, but the roads are completely construction site, the traffic is very bad, two vehicles cannot pass side by side, everywhere is like an excavation site, I hope it will be completed as soon as possible'* reveals the

damage caused by the infrastructure works to the environment and how this situation affects the tourist experience.

Looking at the reviews that may be related to overtourism in relation to Uzungöl, it can be seen that environmental concerns are more prominent. The most frequently mentioned problem of tourists in Uzungöl was visual pollution. It is understood that tourists visiting the region have a negative image in terms of overbuilding, concreting and unplanned urbanisation. In fact, it is a fact that the number of tourism-related structures in Uzungöl has increased, especially in recent periods. Increasing structures cause concretisation by disturbing the natural appearance and visual pollution becomes noticeable for visitors. Atasoy (2010) states that the increase of tourism activities in the region is due to the acceleration of the construction of facilities by the local people after the start of the motorway works in 1990 and the rapid increase of private sector investments. He stated that almost all of the investments made in this context are mainly accommodation and restaurant businesses in the lake region and noted that construction has increased by 125% in the last 35 years. Barakazı (2023) states that the region cannot meet the increasing demand for accommodation in Uzungöl, and as a result, concreting has taken place on the basis of visual pollution. In parallel with the increasing number of tourists and facilities, pollution is one of the issues that disturb tourists. In Uzungöl, in addition to the pollution caused by locals and tourists, waste from the facilities is one of the problems perceived in the region. As a result of the intensive tourist activities in the region, pollution has become inevitable. This density of tourists creates human and traffic congestion as well as pollution in the region. Considering both tourists and day-trippers who come to the region, there is a crowd of people that reaches the level of disturbance in the region. Traffic congestion is also caused by the frequent use of private vehicles to access the region. The pressure on the region's borders means that the infrastructure is inadequate, and the lake is also polluted by waste and environmental pollution.

4.2.2 Findings Regarding the Analysis of Tourists' Overtourism Reviews in Economic Dimension

In the scope of the research, the frequencies of tourists' reviews related to the "Economic" dimension are as follows.

Table 3. Codes and Frequencies Related to the Economic Dimension of Tourists in Uzungöl

Economic Dimension	Frequencies
Inflation	13
Accessibility	13
Destination Image	3
Total	29

Source: Own Elaboration

An analysis of Table 3 shows that the economic dimension is important to tourists after the environmental dimension, and especially inflation and accessibility problems are among the notable problems of overtourism. Tourists made different reviews about the economic conditions in Uzungöl. For example, one tourist stated that *'the service is bad and expensive because it is for tourists'*, which indicates that the quality of the service is not compatible with the price. Another said: *'The customer service is terrible. But only for Turkish customers. Arabs are cherished. Would you believe me if I told you that there is no interest in Turks in these places? It is unnecessarily expensive. It is as if the locals do not want the local tourists to come'* draws attention to the different treatment and economic discrimination between local and foreign tourists. Another tourist pointed out the transport difficulties and the impact of this situation on the tourist experience, saying: *'There was almost Istanbul traffic in Uzungöl, yes, there was traffic all around the lake. The name of a town in the Çaykara district of Trabzon and the name of the lake in that town. It was a place I had seen photographs of and wondered about since my childhood. Although I was not disappointed when I went there, I was sad when I thought about how it used to be'*. This review shows how changing environmental and economic

conditions affect tourists' emotional and aesthetic evaluations. These reviews clearly show the economic dimensions of tourism activities in Uzungöl and the impact of this situation on tourist perceptions.

It can be stated that there are also economic inconveniences for tourists in Uzungöl. In fact, the region is experiencing regional inflation as a result of its excessive commercialisation. The increasing understanding of services, especially for rich Arab tourists, can cause prices in the region to rise considerably, and this situation can be reflected as expensive for local tourists and the public. On the other hand, while the accessibility of the region is a problem from a physical point of view due to congestion and traffic, from an economic point of view it may become inaccessible to domestic tourists due to high costs. In fact, in Uzungöl, which is an over-commercialised region, the image of the destination for tourists can be negatively affected both environmentally and economically. In particular, the fact that the region is economically difficult to reach can give tourists a negative impression of the region. So much so, that the perceived high prices create a negative destination image in the minds of tourists, thus negatively affecting the loyalty of the unsatisfied tourist to the destination (Rajesh, 2013). As a matter of fact, when the number of domestic and foreign tourists coming to Uzungöl and their reviews are taken into consideration, it is seen that unsatisfied domestic tourists move away from the region.

4.2.3 Findings Regarding the Analysis of Tourists' Overtourism Reviews in Socio-Cultural Dimension

In the scope of the research, the frequencies of tourists' reviews related to the "Socio-cultural" dimension are as follows.

Table 4. Codes and Frequencies of Tourists' Reviews on the Socio-cultural Dimension in Uzungöl

Socio-cultural	Frequencies
Touristisation of the Settlement	10
Hostility and Crime	8
Loss of Cultural Identity	6
Marginalization of Local People	3
Total	27

Source: Own Elaboration

Table 4 shows that for tourists, socio-cultural dimensions, especially touristisation, hostility and crime, are among the main problems of overtourism. Tourists' reviews about Uzungöl reflect the profound effects of these socio-cultural changes. For example, one tourist said: *'I was horrified when I visited this natural wonder 10 years ago this year. I saw that hotels, houses, guesthouses, and restaurants had been built everywhere for the sake of rent. Nature has been slaughtered. Let's come to the other point: there is no Turkish at the entrances and on the menus of the restaurants, everywhere is full of Arabic writing. Arabic songs have replaced the Black Sea music that used to be played in these places. So much so that you feel like you are in Arabia. They even built an amusement park in the middle of such a natural wonder, of course with Arabic music playing again. Just to make more money from Arab tourists, they made them feel at home. Shame on you and the mentality that allows you to do this. But remember, this is not their home, it is mine, our home'*. This statement sums up the cultural changes in the region and their impact on the local people. Another review: *'There are hotels and hostels everywhere. There are Arabs in rental cars with 61 plates driving around, and Arabs in dozens of them in every place you enter on foot. We have been officially invaded by the Arabs, and we have even been invaded.'* This underlines the pressure of the increase in the number of tourists on the socio-cultural structure. These reviews clearly reveal the socio-cultural dimensions of overtourism in Uzungöl and the impact of this situation on the experiences of tourists and local people.

Reviews from tourists in Uzungöl reflect serious concerns about increasing hostility, crime and loss of local identity in the area. One tourist said: *'Don't try to go, you'll regret it, it's a problem to get there and a problem to get out, there's nothing to see. There is rubbish everywhere. When Turks are refugees, a fight can*

break out at any moment'. This statement reveals how social tensions and environmental problems in the region are perceived by tourists. Another review: *'It's a slaughtered nature. Hotels and restaurants designed and priced for Arabs. Incredible noise (horns and traffic), piles of rubbish everywhere. The lake is dirty and surrounded by concrete. A place where only Arabs are treated like human beings. Soon there will be a big fight there but be sure you will be beaten by the shopkeepers, not the Arabs. There's nothing to see, don't go', emphasises the social and environmental costs of economic interests. Also: 'It should change its name, not Uzungöl, it should be Arapgöl (Arabiclake). I couldn't read the names of the places or the signs because I don't speak Arabic. It is impossible to walk around, the pavements are used as car parks by the hotels'*, criticises the change in the cultural and physical infrastructure of the region. Finally, *'let's talk about the Arabic signs and the privilege they are given. The name of this country is Turkey, Turkish is spoken here, and our signs are organised in this way. When tourists come to our country, they are welcome. But we cannot forget our own values and change the signs and the language so that we can earn 2-3 cents more'* draws attention to the problems of managing cultural integration processes. These reviews highlight the socio-cultural dimensions of tourism in Uzungöl and the impact of this situation on tourists' experiences.

It is assumed that the perceived economic environment in Uzungöl has similar results in the socio-cultural dimension. In fact, there are problems with tourists being socially disturbed. One example of this is the way in which the social and cultural structure of the region is shaped for a certain mass of tourists (Arab tourists) who come to the region. This situation creates the impression that the cultural identity of the region has been lost and can lead to the marginalisation of some local people in the region. So much so that the fact that the region is dominated by a certain group of tourists, as well as the arrival of many tourists to the region, can make the local people feel that they are in a minority. In fact, from the perspective of tourists, the goal of earning more money is thought to be particularly effective in creating such a social and environmental environment in Uzungöl. However, unlike the tourists, Güzel & Çakır (2023a) also found in their research that the region did not experience any negative socio-cultural effects of tourism according to the perception of the local people. Alptekin (2017) came to a similar conclusion, stating that the tourism-induced economic change in the region did not cause any significant change in the cultural and social structure. The difference between the tourists' image of Uzungöl and the local people's perception of the effects of tourism can be seen by considering the results of this study and the results of the research conducted.

5. Conclusion

In parallel with the growing international tourism activities, the demand for tourist destinations is increasing quantitatively every day. Indeed, countries aiming to claim a larger share of international tourism income are marketing their tourist destinations with various attractions. Especially in developing countries, the tourism sector is becoming more important. However, in such countries, the problem of sacrificing sustainable principles arises, especially due to the dominance of profit-oriented approaches. Tosun (2001) cites national economic policy priorities, the structure of public administration, the emergence of environmental problems, excessive commercialization, and the structure of the international tourism system as obstacles to the development of sustainable tourism. Especially in developing countries like Turkey, it can be understood that there are destinations that may experience problems due to the barriers mentioned by Tosun (2001). In this context, the findings related to the reviews of tourists about Uzungöl, where problems are frequently mentioned, are also noteworthy.

As a result, although Uzungöl has many protection statuses, why has it entered an unsustainable path? This question can be answered briefly as 'prioritising economic returns'. Especially Arab tourists, who bring more money, are the favourite of the region. The shaping of the region according to the wishes of Arab tourists has caused local tourists to move away from Uzungöl over the years. It is understood that the local tourists, who are economically uncomfortable, are also dissatisfied in environmental and social terms and move away from the region. Ultimately, utilitarian policies have been followed in Uzungöl due to the fact that the environmental, socio-cultural and even economic negativities are ignored and only the motive of making money is acted upon. To put it with the interpretation used by Akoğlu Kozak et al.

(2013) for countries and regions far from sustainable tourism, it is seen that Uzungöl also acts with the understanding of 'economic growth at all costs.

Within the framework of the research, what kind of model can be proposed to prevent unsustainable practices in Uzungöl? It is thought that it would be useful to consider the results of the studies carried out in the region and the results of this study in a holistic perspective. In this context, it would be more accurate to evaluate the issue in terms of the evolution of tourism in the region, its impacts and sustainable tourism. On the other hand, it is necessary to know that local people, tourists, and other tourism stakeholders have a direct impact on the evolution of tourism in the region. Therefore, it is necessary to address the evolution of tourism in the region so that all stakeholders can evaluate the region and tourism in the region. Studies on the evolution of tourism in the region began in the 1990s, and attention was particularly drawn to environmental problems (Akkan et al., 1993; Yazıcı & Cin, 1997). At the point of examining the problems of tourism in the region in more detail, Alptekin (2017) revealed that the social structure and culture in Uzungöl did not deteriorate much. Küçükaşçı (2019) also revealed the dilemma between the predicted and achieved results of the tourism policy in the region with the results obtained by interviewing local people, civil society members and politicians. Kılıç (2020) discussed the evolution of tourism in the region in terms of tourism indicators by interviewing stakeholders in the region and revealed that there are problems such as deficiencies related to control, supervision, incentives and support, insufficient infrastructure and superstructure, and the inability to create zoning plans. Mutlu (2021) interviewed people living in the region and discussed photographs from different periods of Uzungöl. He found that the region had become concretised, that there was an increase in waste and that there were no measures in place to protect resources. Güzel (2022) conducted interviews with local people and other tourism stakeholders in order to provide a holistic perspective on the development and impacts of tourism in the region and the understanding of sustainable tourism management. In this context, although there are differences between local people and stakeholders in the perception of the impacts of tourism, it was found that there are negative impacts in the region.

5.1 Recommendations for Practice and Researchers

Considering the environmental, economic, and socio-cultural impacts of tourism in Uzungöl, the following recommendations are made for practitioners and researchers:

5.1.1 Recommendations for Implementation:

Environmental Dimension

- 1) Sustainable Tourism Planning: Tourism planning should be based on the principles of environmental sustainability. This planning should include the protection of natural areas, the reduction of visual and environmental pollution and the maintenance of tourism without harming the ecological balance.
- 2) Waste Management and Infrastructure Development: Waste collection and treatment capacity should be increased through the establishment of effective waste management systems. Investment should also be made in infrastructure projects to reduce traffic congestion and improve pedestrian access.
- 3) Environmental Education: The importance of protecting the natural beauties of the region should be emphasised by organising environmental awareness trainings for local people and tourists.

Economic Dimension

- 1) Review Pricing Policies: A fair and balanced pricing policy should be implemented to ensure that tourism services are accessible to local people and domestic tourists.
- 2) Supporting Small Enterprises: Support for small and medium sized enterprises should be encouraged to revitalise the local economy and ensure that local people benefit from tourism.
- 3) Increasing Tourism Diversity: To avoid dependence on a single tourist profile, different types of tourism and activities should be developed. In this way, visitors from different income groups and cultures can be attracted to the region.

Socio-Cultural Dimension

- 1) Protection of Cultural Heritage: Projects should be developed to preserve and promote local culture and traditions. This can be an attractive element for tourists while strengthening the cultural identity of the region.
- 2) Social Cohesion Programmes: Programmes and events should be organised to promote social cohesion between locals and tourists. This will help to prevent potential hostility and misunderstandings.
- 3) Language and Communication: Businesses in the region should be supported to provide services in international languages such as English as well as the local language. This can reduce communication barriers and provide a more inclusive tourism experience.

3.1.1 Recommendations for Researchers:

- 1) Research Studies: In order to better understand the impact of tourism in Uzungöl, comprehensive research should be carried out using different disciplines. Studies covering socio-economic, environmental, and cultural dimensions can play an important role in shaping tourism policy in the region.
- 2) Multidimensional Studies: Studies that focus on the socio-cultural impacts of tourism can help to understand changes in the region and develop strategies to adapt to these changes. In particular, studies that compare the perspectives of local people and tourists can provide valuable information for policy makers.
- 3) Long-term Monitoring: Continuous data collection and analysis should be carried out to monitor the long-term impacts of tourism activities in the region. This can improve the effectiveness of future planning and management strategies.
- 4) Cultural Interactions: Theoretical models should be developed to analyse the impact of tourism on cultural interactions, and strategies should be developed to manage these interactions at local and global levels.

Limitations and Future Directions

This study has some limitations. First, it is an exploratory study that provides a snapshot of reviews on the web platform, which limits the study. Second, the study focuses on a specific city and the data from a specific web platform. The scope of the research can be expanded by examining similar destinations and including information from different online review sites. Third, due to Covid-19, there has been a decrease in tourist mobility worldwide. Therefore, data on the number of tourists before 2020 was used because it was thought that a statistically accurate evaluation could not be made. Finally, online platform reviews are written by those who visit these places. Taking into account the opinions of the local people will contribute to a deeper understanding of the overtourism phenomenon in the region.

REFERENCES

- Adie, B. A., Falk, M., & Savioli, M. (2020). Overtourism as a perceived threat to cultural heritage in Europe. *Current Issues in Tourism*, 23(14), 1737-1741.
- Akkan, E., Doğu, A. F., Çiçek, İ., Gürgen, G., Yiğitbaşıoğlu, H., & Somuncu, M. (1993). Uzungöl. Ankara University, *Journal of Turkish Geography Research and Application Center*, 2, 251-262.
- Akoğlu Kozak, M., Evren, S., & Çakır, O. (2013). Tourism paradigm throughout the historical process. *Anatolia: Journal of Tourism Research*, 24(1), 7-22.
- Alonso-Almeida, M., Borrajo-Millán, F., & Liu, Y. (2019). Are social media data pushing overtourism? The case of Barcelona and Chinese tourists. *Sustainability*, 11(12), Article 3356. DOI:10.3390/su11123356
- Alptekin, M. Y. (2017). Conservative tourism: Tourism activities and social interaction in Trabzon/Uzungöl. In *2nd Eurasian Conference on Language and Social Sciences* (pp. 119-149).
- Atasoy, M. (2010). Monitoring of land use change in a special environmental protection zone with GIS: Example of Uzungöl. In *Remote Sensing and Geographic Information Systems Symposium; Scientific Research and Essays* (Vol. 5, pp. 790-798), Ankara, Turkey.
- Barakazi, M. (2023). Unsustainable Tourism Approaches in Touristic Destinations: A Case Study in Turkey. *Sustainability*, 15(6), 4744.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101.

- Butler, R. (2018). Challenges and opportunities. *Worldwide Hospitality and Tourism Themes*, 10(6), 635–641. DOI:10.1108/WHATT-07-2018-0042
- Cheer, J. M., Milano, C., & Novelli, M. (2019). Tourism and community resilience in the anthropocene: Accentuating temporal overtourism. *Journal of Sustainable Tourism*, 27(4), 554–572.
- Creswell, J. W. (2013). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. Sage Publications.
- Croes, R., Rivera, M. A., Semrad, K., & Khalizadeh, J. (2017). *Happiness and Tourism: Evidence from Aruba*. Institute for Tourism Studies. Orlando.
- D'Mello, C., Chang, L. C., Pillai, S. K. B., Kamat, K., Zimmermann, F. M., & Weiermair, K. (2016). Comparison of multi-stakeholder perception of tourism sustainability in Goa. *International Journal of Hospitality & Tourism Systems*, 9(2), 1–13.
- Díaz-Parra, I., & Jover, J. (2021). Overtourism, place alienation, and the right to the city: Insights from the historic center of Seville, Spain. *Journal of Sustainable Tourism*, 29(2–3), 158–175.
- Dodds, R., & Butler, R. (2019a). The enablers of overtourism. In Dodds, R., & Butler, R. (Eds.), *Overtourism: Issues, realities and solutions* (pp. 6–24). Walter de Gruyter.
- Dodds, R., & Butler, R. (2019b). The phenomena of overtourism: A review. *International Journal of Tourism Cities*, 5(4), 519–528.
- Drápela, E. (2023). Creating strategies to mitigate the adverse effects of overtourism in rural destinations: Experience from the Czech Republic. *Sustainability*, 15(24), Article 16958.
- Eusébio, C., Kastenholz, E., & Breda, Z. (2014). Tourism and sustainable development of rural destinations: A Stakeholders' view. *Revista Portuguesa de Estudos Regionais*, 36, 13–21.
- Ganzaroli, A., De Noni, I., & Bonera, M. (2021). The influence of foreigners' reviews on TripAdvisor ranking of restaurants in Venice: Implications for the sustainability of over-touristed heritage cities. *Current Issues in Tourism*, 24(14), 2044–2058.
- Genç, K., & Türkay, O. (2022). Overtourism in Istanbul: An interpretative study of non-governmental organizational views. *Journal of Tourism and Cultural Change*, 20(5), 652–677. DOI: 10.1080/14766825.2021.1987448
- Ghaderi, Z., Hall, M. C. M., & Ryan, C. (2022). Overtourism, residents and Iranian rural villages: Voices from a developing country. *Journal of Outdoor Recreation and Tourism*, 37, Article 100487.
- Google (2023). Uzungöl, Çaykara/Trabzon. 40° 37' 04"N 40° 17' 57"E. <https://earth.google.com/web>
- Güzel, M. O. (2022). *Development and impacts of tourism in Uzungöl from a sustainable tourism perspective* [Doctoral dissertation]. Eskişehir: Anadolu University.
- Güzel, M. O., & Çakır, P. G. (2023a). Local residents' perception of the effects of tourism. A study in Uzungöl. *Journal of Gastronomy, Hospitality and Travel*, 6(1), 276–299.
- Güzel, M. O. & Çakır, P. G. (2023b) Evaluation of tourism stakeholders' understanding of sustainable tourism management: A research for Uzungöl. *The Journal of Institute of Black Sea Studies*, 9/19, ss. 343–362.
- Hall, C. M., & Lew, A. A. (2009). *Understanding and Managing Tourism Impacts: An Integrated Approach*. Routledge.
- Haulot, A. (1974). *Tourism and Environment*. Marabout SA: The Search for Balance.
- Hess, J. S. (2019). Thailand: Too popular for its own good. In Dodds, R., & Butler, R. W. (Eds.), *Overtourism: Issues, Realities, and Solutions* (pp. 111–124). Walter de Gruyter.
- Hidalgo-Giralt, C., Palacios-García, A., Barrado-Timón, D., & Rodríguez-Esteban, J. A. (2021). Urban industrial tourism: Cultural sustainability as a tool for confronting overtourism—Cases of Madrid, Brussels, and Copenhagen. *Sustainability*, 13(9), Article 4694. DOI: 10.3390/su13094694
- Jacobsen, J. K. S., Iversen, N. M., & Hem, L. E. (2019). Hotspot crowding and over-tourism: Antecedents of destination attractiveness. *Annals of Tourism Research*, 76, 53–66.
- Jamal, T., & Getz, D. (1999). Community roundtables for tourism-related conflicts: The dialectics of consensus and process structures. *Journal of Sustainable Tourism*, 7(3–4), 290–313.
- Jordan, P., Pastras, P., & Psarros, M. (2018). *Managing Tourism Growth in Europe: The ECM Toolbox*. European Cities Marketing & Toposophy.
- Khomsí, M. R., Fernandez-Aubin, L., & Rabier, L. (2020). A prospective analysis of overtourism in Montreal. *Journal of Travel & Tourism Marketing*, 37(8–9), 873–886. DOI: 10.1080/10548408.2020.1791727
- Kılıç Ö. (2020). *Sustainable tourism development in the Uzungöl region: A qualitative study in the context of sustainable tourism indicators*. Unpublished master's thesis. Gümüşhane: Gümüşhane University.
- Krippendorff, J. (1975). *Die Landschaftsfresser: Tourismus und Erholungslandschaft-Verderben oder Segen?* Hallwag.
- Krippendorff, K. (2004). *Content Analysis: An Introduction to Its Methodology*. Sage Publications.
- Kuščer, K., & Mihalič, T. (2019). Residents' attitudes towards overtourism from the perspective of tourism impacts and co-operation—The case of Ljubljana. *Sustainability*, 11(6), Article 1823.
- Küçükaşçı, E. Ş. (2019). *The impact of policy-making on tourism development: The case of Uzungöl*. Unpublished master's thesis. Istanbul: Boğaziçi University.

- Loverio, J. P., Chen, L. H., & Shen, C. C. (2021). Stakeholder collaboration, a solution to overtourism? A case study on Sagada, the Philippines. *Tourism Geographies*, 1-22. DOI: 10.1080/14616688.2021.1957923
- Martín, J. M. M., Martínez, J. M. G., & Fernández, J. A. S. (2018). An analysis of the factors behind the citizen's attitude of rejection towards tourism in a context of overtourism and economic dependence on this activity. *Sustainability*, 10(8).
- Martin-Fuentes, E., Nieto Ferrando, J., Marine-Roig, E., & Ferrer-Rosell, B. (2020). From blockbuster to neighborhood buster: The effect of films on Barcelona. *Sustainability*, 12(6), Article 2290. DOI: 10.3390/su12062290
- Mihalic, T. (2020). Conceptualizing overtourism: A sustainability approach. *Annals of Tourism Research*, 84, Article 103025. DOI: 10.1016/j.annals.2020.103025
- Mihalic, T., & Kuščer, K. (2022). Can overtourism be managed? Destination management factors affecting residents' irritation and quality of life. *Tourism Review*, 77(1), 16-34. DOI: 10.1108/TR-02-2021-0027
- Moreno-Gil, S., & Coca-Stefaniak, J. A. (2020). Overtourism and the sharing economy – Tourism cities at a crossroads. *International Journal of Tourism Cities*, 6(1). DOI: 10.1108/IJTC-11-2018-0125
- Mutlu, E. (2021). *The problem of overtourism in natural tourist areas in Eastern Black Sea: Examples of Ayder and Uzungöl*. Unpublished master's thesis. Ondokuz Mayıs University.
- Namberger, P., Jackisch, S., Schmude, J., & Karl, M. (2019). Overcrowding, Overtourism and Local Level Disturbance: How Much Can Munich Handle? *Tourism Planning & Development*, 16(4), 452-472.
- Pearce, P. L. (2018). Limiting overtourism: The desirable new behaviors of the smart tourist. In *Proceedings of the Tourism Intelligence Forum (t-Forum) Global Exchange Conference*, Palma de Mallorca.
- Peeters, P., Gössling, S., Klijs, J., Milano, C., Novelli, M., Dijkmans, C., Eijgelaar, E., Hartman, S., Heslinga, J., Isaac, R., Mitás, O., Moretti, S., Nawijn, J., Papp, B., & Postma, A. (2018). *Research for TRAN Committee - Overtourism: impact and possible policy responses*. European Parliament, Policy Department for Structural and Cohesion Policies, Brussels.
- Rajesh, R. (2013). Impact of tourist perceptions, destination image, and tourist satisfaction on destination loyalty: A conceptual model. *PASOS. Revista de Turismo y Patrimonio Cultural*, 11(3), 67-78.
- Rozmiarek, M., Malchrowicz-Moško, E., & Kazimierzczak, M. (2022). Overtourism and the impact of tourist traffic on the daily life of city residents: A case study of Poznan. *Journal of Tourism and Cultural Change*, 20(5), 718-734. DOI: 10.1080/14766825.2021.1956350
- Sarantakou, E., & Terkenli, T. S. (2019). Non-Institutionalized Forms of Tourism Accommodation and Overtourism Impacts on the Landscape: The Case of Santorini, Greece. *Tourism Planning & Development*, 16(4), 411-433.
- Seyhan, B. (2023). The Conceptual Grounding of Overtourism and Overtourism-Driven Change: Olympos Case. *Advances in Hospitality and Tourism Research (AHTR)*, 11(3), 417-442.
- Saldaña, J. (2015). *The Coding Manual for Qualitative Researchers*. Sage.
- Sequera, J., & Nofre, J. (2020). Touristification, transnational gentrification, and urban change in Lisbon: The neighborhood of Alfama. *Urban Studies*, 57(15), 3169-3189. DOI: 10.1177/0042098019834711
- Seraphin, H., Sheeran, P., & Pilato, M. (2018). Over-tourism and the fall of Venice as a destination. *Journal of Destination Marketing & Management*, 9, 374-376. DOI: 10.1016/j.jdmm.2018.01.011
- Szromek, A., Kruczek, Z., & Walas, B. (2020). The attitudes of tourist destination residents toward the effects of overtourism: Kraków case study. *Sustainability*, 12(1), 228. DOI: 10.3390/su12010228
- Tosun, C. (2001). Challenges of sustainable tourism development in the developing world: The case of Turkey. *Tourism Management*, 22(3), 289-303.
- Trabzon Provincial Directorate of Culture and Tourism (2020). Taken by the author from the archives of the Provincial Directorate of Culture and Tourism.
- Turner, L., & Ash, J. (1975). *The "golden hordes": International tourism and the pleasure periphery*. Constable Limited.
- UNWTO (World Tourism Organization). (2018). *Overtourism? Understanding and Managing Urban Tourism Growth beyond Perceptions*. Madrid, Spain.
- UNWTO (World Tourism Organization). (2022). *145 Key Tourism Statistics*. <https://www.unwto.org/tourism-statistics/key-tourism-statistics>
- Veríssimo, M., Moraes, M., Breda, Z., Guizi, A., & Costa, C. (2020). Overtourism and tourismphobia: A systematic literature review. *Tourism: An International Interdisciplinary Journal*, 68(2), 156-169.
- World Economic Forum. (2017). *Wish you weren't here: What can we do about over-tourism?* <https://www.weforum.org/agenda/2017/09/what-can-we-do-about-overtourism>
- Widawski, K., Krzemińska, A., Zaręba, A., & Dzikowska, A. (2023). A Sustainable Approach to Tourism Development in Rural Areas: The Example of Poland. *Agriculture*, 13(10), Article 2028.
- Yazıcı, H., & Cin, M. (1997). Geographic observations in Uzungöl tourism center. *Turkish Journal of Geography*, 32, 57-77.
- Yeşilyurt, C. (2002). *Evolving of recreation resources in Uzungöl district respect to geography*. Unpublished master's thesis. Çanakkale: Onsekiz Mart University.

Young, G. (1973). *Tourism: Blessing or blight?* Penguin Books.

Żemła, M. (2020). Reasons and consequences of overtourism in contemporary cities: Knowledge gaps and future research. *Sustainability*, 12(5), Article 1729. DOI: 10.3390/su12051729

ORCID

Melik Onur Güzel  <https://orcid.org/0000-0002-6540-0131>

Eşref Ay  <https://orcid.org/0000-0003-4092-6425>

Ozan Çatır  <https://orcid.org/0000-0003-3168-7338>

Notes on contributors

Melik Onur Güzel currently works as a Postdoctoral Researcher at Tourism Faculty of Anadolu University, and he is a part of scientific project.

Eşref Ay is an Independent Researcher Dr. and he currently works as a tour guide. His research interests are tourism guidance, sustainable tourism, tourism geography, and recreation.

Ozan Çatır is an Associate Professor of Tourism and Travel Services Department, Ulubey Vocational School, Uşak University, Türkiye.

A Reassessment of Well-Being in Vocational Preparation: A New Model Focusing on Psychological Resilience and Occupational Identification in Tourism Education

Mehmet Düzgün  ¹

1. Ministry of National Education, Ankara, Turkey

ABSTRACT

The fact that there is no alternative to technology and information communication technologies in the age we live in requires a close examination of the concept of technostress and the development of preventive approaches. If prospective employees aiming for a career in the tourism sector do not have sufficient resilience, they may not be ready for a long career plan due to the possible obstacles they may encounter in the sector. The study revealed the importance of relational resources in achieving and sustaining psychological resilience and professional identification. In addition, the study aimed to determine the effect of psychological resilience on technostress and the mediating role of professional identification in this effect. This study, which was designed in accordance with the causal screening model, was conducted with 393 students studying tourism. The findings of the study showed that psychological resilience positively affected occupational identification by reducing technostress. In addition, the findings emphasized that despite the technostress caused by the intensive use of technology, businesses with high psychological resilience and employees who are identified with their profession will provide competitive advantage in the tourism sector. Policy makers regarding human resources in tourism and educational institutions should focus on analyzing factors related to resilience and stress of employees or candidates/students.

KEYWORDS

Tourism Sector, Psychological Resilience, Occupational Identification, Technostress.

ARTICLE HISTORY

Received 22 June 2024 Accepted 04 October 2024

1. Introduction

The concept of psychological resilience is becoming increasingly important in today's highly pressured and volatile business environments. In this respect, it appears as a key to employees' ability to perform at high levels and to strengthen their capacities in challenging working environments (Amir & Standen, 2019). However, identification occurs when an individual perceives a strong sense of belonging in a social sense, whether to an organisation or to an occupation. Therefore, the concept of occupational identification refers to the extent to which people define themselves in terms of an occupation (MacArthur et al. 2016). On the other hand, stress has become an important problem for many people and researchers in recent years and has become a global phenomenon. The main reason for this situation stems from the effect of stress on the concepts of productivity, performance and satisfaction. Technostress is defined as "a stress experienced by users of information and communication technologies" (Ragu-Nathan et al., 2008, p. 417). When the relevant literature on technostress is examined, it has been determined based on the researches that technostress may lead to a number of negative outcomes for individuals and organisations such as dissatisfaction, fatigue and decreased productivity (Tarafdar et al., 2010; Joo et al., 2016). In spite of these unfavourable results, it is seen that few previous studies were conducted in the field of education and the researches were mostly focused on teachers (Al-Fudail & Mellar, 2008; Jena, 2015). On the other hand, no study testing the impact of psychological resilience on technostress and the role of professional identification upon this effect in a quantitative design was found in the literature search.

Within the scope of this research, it is aimed to contribute to the development of plans and policies to be developed to strengthen the resilience and professional identification of vocational high school students, who are expected to play an important role in this sector in the future with the widespread use of technology in every field within the tourism sector. In this direction, the importance of developing preventive approaches to technostress has also been revealed in terms of the model created. However, there may be variability in terms of the level of technostress that an employee might face due to the fact there are differences in the skill sets that can affect the level of technostress and different individuals react differently to the same situation (Tiwari, 2020). From this point of view, this study focuses on investigating a mediating role of professional engagement in the association between psychological resilience with technostress and especially how professional engagement affects this relationship. In this sense, whether the concepts of professional identification and psychological resilience are preventive against technostress was tested within the framework of the model. Self-efficacy theory and technology acceptance model formed the basis of this research, which was based on the importance of the ability to cope with difficulties and changes in the period of preparation for the profession, which is an important turning point in human life, as well as the reality of the effects of the increase in the use of technology. The fact that there is no alternative to both technology and information communication technologies in the age we live in makes it necessary to closely examine the concept of technostress and to put forward preventive approaches against this type of stress. In this context, basic aim of this study is to identify the effect of psychological resilience on technostress and the mediating role of professional identification in this effect. The examination of the subject in terms of vocational high school students, who will be one of the most important elements of production and employment in tourism enterprises in the future, bears great importance for the future of the country's economy.

2. Conceptual Framework

2.1 Self-efficacy Theory

Self-efficacy is an indicator of the extent to which individuals have confidence in their own abilities (Bandura & Adams, 1977). Therefore, self-efficacy represents individuals' belief in their own competence and abilities (Bandura, 2006). In the basic research on self-efficacy, it has been determined that individuals with high self-efficacy beliefs make more effort to be successful due to their higher levels of interest and motivation compared to individuals with low self-efficacy beliefs (Bandura, 1997; Bandura, 2012). Self-efficacy is shaped around factors such as internal interaction and individual participation. The interaction

between these factors shapes individuals' ability to exhibit their behaviours as well as their beliefs about behavioural outcomes (Pihie & Bagheri, 2013). Compeau and Higgins (1995) argued that self-efficacy represents individuals' beliefs about what they can do in the future. In addition, individuals are motivated by the self-efficacy they perceive beyond their objective abilities and this perception directly affects behaviours (Markman et al., 2002).

Self-efficacy causally affects expected behavioural outcomes. It also consists of cognitive, social or physical skills through experiences (Bandura, 1994). According to Bandura (1986), self-efficacy belief is influenced by direct experiences, indirect experiences, social situation and psychological state. While direct experiences represent the inferences reached as a result of experiences, indirect experiences represent the individual's being affected by the successes and failures of other individuals similar to him/her. Social situation includes the individual's being influenced by social models. Psychological state is the individual's expectation of success or failure. To put it in more detail, direct and indirect developments provided by experiences and social models shape self-efficacy. At this point, the psychological context provides positive mood to reduce people's stress reactions and change emotional tendencies (Bandura, 1994). Therefore, according to Bandura, the improvement of the individual's living standards and the high level of satisfaction are directly related to the high level of self-efficacy (Bandura, 1986; Bandura, 1994). According to the self-efficacy perspective, students' development in agency contributes to their self-efficacy, emotional intelligence and metacognition (Peng & Wang, 2020). On the other hand, self-efficacy is highly effective in predicting behavioural outcomes compared to other motivational tools in the context of psychology and education (Cherian & Jacob, 2013). Self-efficacy is related to the belief in one's capacity and agency, and this perceived capacity and agency can develop through the individual's will and modelling. In addition, self-efficacy is inspired by a sense of commitment that makes students feel capable and confident in overcoming learning demands (Christenson et al., 2012). As a consequence, self-efficacy also plays an important role as a motivational factor in encouraging students to engage in action (Reeve & Tseng, 2011). In the related literature, a limited number of studies addressing self-efficacy from the perspective of tourism education were found. Duzgun and Celik (2020), found that self-efficacy has significant effects on career expectancy and career goal. Tsai et al. (2017) revealed that self-efficacy in tourism education plays a mediating role between internship effectiveness and career readiness. Similarly, Bui et al. (2017) concluded that self-efficacy in tourism education directly affects academic performance.

2.2 Technology Acceptance Model

The technology acceptance model proposed by Davis (1989), aims to discover why users accept or reject a technology. A more generalised theory, the technology acceptance model based on the theory of reasoned action put forward by Fishbein and Ajzen (1975), is a generally accepted model in terms of defining the factors that contribute to the acceptance of a technology. This model suggests that when users are presented with a new technology, a number of factors influence their decisions about how and when to use the technology. In this context, people tend to use information and communication technologies to the extent that they believe that they will help them do their jobs better. This first variable in the technology acceptance model is expressed as perceived benefit. On the other hand, even if potential users believe that a particular application is useful, they may also believe that the use and performance benefits will be measured by the effort to use the application because the systems are very difficult to use (Davis, 1989). Therefore, in the context of the technology acceptance model, in addition to the fact that usefulness and ease of use are seen as two basic factors to predict technology acceptance, these two basic beliefs mediate the effect of external variables on intention (Davis, 1989; Mathieson, 1991; Adams et al., 1992). On the other hand, although the technology acceptance model is a model that can be applied to various technologies, it has been criticised for not providing sufficient information about individuals' views on new systems (Moon & Kim, 2001; Perea Monsuwe et al., 2004). Wang et al. (2020), revealed that variables related to individual differences play a vital role in the implementation of technology. Similarly, Venkatesh (2000), discovered strong relationships between individual differences and technology acceptance. From this perspective, in this research, the "psychological resilience" and "professional identification" of potential employees who will work in the tourism sector in the future on the basis of individual differences were questioned within the scope of the integrated model in terms of being preventive towards technostress.

2.3 Psychological Resilience

The psychological resilience has been described as “a measure of the ability to cope successfully with stress” (Connor & Davidson, 2003, p. 77). Burton et al. (2010, p. 266) define psychological resilience as “the capacity of people to effectively cope with, adapt to or recover from stress or difficulties”. Indeed, people with low levels of psychological resilience might experience depression, stress and anxiety as well as physical health complaints when faced with difficulties (Burton et al., 2010). However, psychological resilience is associated with behavioural adaptation, which is generally accepted as intrinsic well-being, effective functioning, or both. Accordingly, it can also be seen as a measure of adaptation towards difficult and highly stressful conditions (Masten et al., 1990).

Individual differences and different personality traits contribute to the emergence of different approaches to coping with stress (Leandro & Castillo, 2010; Jafari et al., 2013). On the other hand, psychological resilience has been found to include self-regulatory functions that contribute to the individual's recovery and return to a point of balance in order to prevent the negative effects of an undesirable situation (Gardner et al., 2008). In addition, job commitment and professional skills are associated with psychological resilience (Skovholt et al., 2001). Today, both the rapid change in technology and the fact that digital platforms take more place in human life appear as a stress factor (Moreno et al., 2019).

In contrast, there is a scant number of studies on psychological resilience among students. Garg and Sarkar (2020), in their research on 300 university students, found that psychological resilience is a determining factor for the formation of wellness in students. Souri and Hasanirad (2011) found that psychological well-being is affected by psychological resilience in their study with the participation of 414 students. Mayor-Silva et al. (2021), in a study conducted on nursing and physical therapy students in China, found the methodological deficiencies of lecturers to be the biggest factor of academic stress in the students studied. Ran et al. (2020), in a study conducted with 1770 participants in China, found there was a negative correlation that existed between psychological distress and psychological resilience. However, depression and anxiety symptoms among the participants were determined as 47.1% and 31%, respectively. Hu et al. (2015), in a study including 60 studies using the meta-analysis method, found that psychological resilience is associated by negative predictors of psychological functionality like depression, anxiety and negative affective experience, and was positively related to positive predictors of psychological functionality like well-being, life satisfaction and positive affective outcome. Neville et al. (2019), emphasised the positive effects of supportive relationships with both peers and teachers and taking part in communities to increase students' psychological resilience.

2.4 Occupational Identification

The concept of identification based on the theory of social identity (Foreman & Whitten, 2002). Based on social identity theory, the self-concept consists a social identity that includes unique characteristics such as abilities and interests. Accordingly, individuals are inclined of categorising them and others under different social groups. This classification enables individuals to organise others in their personal social environment and to position themselves and others under this classification (Mael & Ashforth, 1992). Therefore, based on the social identity theory, having different qualifications or requirements in occupations can be considered as a very important platform for the development of occupational identity. On the other hand, identity can also promote the internalisation as well as commitment to the values and norms of the group and contribute to homogeneity in behaviour and attitudes (Ashforth & Mael, 1989). In the literature, the difference between the concepts of professional identification and organisational identification is clearly emphasised. Organisational identification is defined as the perceived unity with the organisation and the feeling that the achievements and setbacks of the organisation are experienced by the individual as one's own achievements (Mael & Ashforth, 1992). Occupational identification, on the other hand, is defined as “the preference of occupational identities over other identities” (Tak et al., 2009, p. 488). Bartels et al. (2010, p. 212) defined occupational identification as “the extent to which employees identify themselves with the profession they practice and its typical characteristics”. The literature review reveals that prior studies primarily focus on the association between professional identification and organisational identification (Apker & Fox, 2002; Bartels et al., 2010) and the influence of professional identi-

fication upon job satisfaction (Loi et al., 2004). On the other hand, Apker and Fox (2002), found that occupational identification appears to be stronger than the organisational identification. Bartels et al. (2010), found that workers identify more strongly within their professions rather than with their organisations. Loi et al. (2004), found that occupational identification and job satisfaction are positively related. Similarly, Hirschi (2012), found that occupational engagement plays a mediating role in the relationship between self-evaluation and job belonging.

2.5 Technostress

Workplace stress is an important problem that can contribute to a wide range of health and quality of life problems (Ayyagari, 2011). Technostress concept firstly addressed by Brod (1984), and he thought that technostress was caused by the failure of employees to adapt to information communication technologies in a healthy way. Later, the concept of technostress was discussed in detail according to Tarafdar et al. (2007), Tarafdar and Tu (2010), Tarafdar et al. (2011) and Tarafdar et al. (2015). Technostress is an adaptation problem experienced by individuals when they cannot deal with or adapt to information and communication technologies (Tarafdar et al., 2007). Therefore, technostress occurs with the use of information and communication technologies (Ragu-Nathan et al., 2008; Ayyagari et al., 2011; Tarafdar et al., 2019). The concept of technostress is classified under five headings. This classification is as follows (Tarafdar 2007, p. 314-315; Ragu Nathan et al., 2008, p. 3):

Techno-overload: Describes situations in which information communication technology compels users to work faster and for longer periods of time.

Techno-hystila: Describes the blurring that occurs when information communication technologies are potentially accessible to people at all times and employees feel the need to be constantly “connected”.

Techno-complexity: Describes situations where changes and innovations in information and communication technologies cause users to feel inadequate in terms of their skills.

Techno-distrust: Associated with situations where people feel threatened to lose their jobs as a result of the presence of other individuals who are more familiar with ICTs.

Techno-uncertainty: Identifies situations in which people feel unsettled by continuing changes and upgrades in information and communication technologies.

Technostress occurs when there is a contradiction between employees' abilities and the demands imposed on them by the working environment (Suh & Lee, 2017). In the literature, it is seen that research on technostress is mostly focused on individuals and employees (Tu & Ragu-Nathan, 2010; Joo et al., 2016), while the number of studies on students is quite limited (Qui, 2019; Wang et al., 2020). Qui (2019), on the other hand, found that the usage of mobile devices for academic purposes caused no technostress in his research on 208 university students. In the literature review, no research addressing the technostress status of students receiving vocational education at high school level was found. Wang et al. (2020), conducted a study with 740 university students and found that technostress and burnout are positively correlated.

2.6 Use of Technology in Tourism Sector

The tendency towards the use of technology in order to increase productivity in enterprises has reached a very important position in terms of enterprises operating in the tourism sector. This increasing tendency towards technology directly affects the quality of the work done in the tourism sector and the job skills of the employees (Komurcu et al., 2021). Studies have revealed the benefits of adapting to developing technologies in the tourism sector in terms of efficiency and cost (Cobanoglu et al., 2011; Brochado et al., 2016; Ivanov et al., 2017). On the other hand, factors such as adaptation to technological innovations as well as adaptation to technological innovations, increased workload and adaptation to new workflow models can cause stress on employees (Srivasta et al., 2015). Studies have revealed the negative effects of this situation, which is referred to as technostress, on job satisfaction, productivity and performance (Tarafdar, 2007; Ayyagari et al., 2011; Alam, 2016; Joo et al., 2016). In the tourism sector, useful applications such as robots, big data, cloud computing, augmented reality, augmented reality, and the Internet of Things have gained importance with Industry 4.0. However, in order to achieve success with these technologies, skills

training for employees and the design of organisational structure and management that will enable new employees to adapt to these technologies are required (Kuo et al., 2017).

3. Hypothesis Development

3.1 Psychological Resilience-Technostress

Studies on technostress have focussed on the factors that cause technostress and their solutions, the barriers of technostress, the consequences of technostress, and the demographic factors associated with technostress (Leung, 2011; Shu et al., 2011; Hwang & Cha, 2018; Wang et al., 2020). Hwang and Cha (2018), found in their study the employees with a high focus on promotion were resistant to the negative impacts of the factors that cause technostress. On the other hand, studies have found that workers' stress causes them to refrain from participating in organisational goals, which leads to a decrease in both personal and the organisational level of performance (Leung et al., 2011; Tziner et al., 2015). In addition, inhibitors for technostress have been suggested as providing technical support, providing support for digital literacy, increasing technology effectiveness and adjusting the regulatory focus (Ragu-Nathan et al., 2008; Shu et al., 2011; Hwang & Cha, 2018). Psychological resilience, which is a concept put forward in research on stress management, consists of attachment control and challenge behaviours. In this context, it is also considered to affect the mechanisms that increase the performance of individuals experiencing stress (Saltık & Kızılırmak, 2020). Based on the researches and the results obtained, H1 is designed as follows:

H1. Psychological resilience negatively and significantly affects technostress.

3.2 Psychological Resilience - Occupational Identification

Occupational identification is the individual's association of the distinctive features of his/her profession with his/her own identity (Erdem, 2020). In studies conducted in the field of social sciences, the relationship between the concept of psychological resilience and occupational identification has been addressed in the context of cause and effect in quantitative studies (Hirschi, 2012; Tekeli et al., 2021). Tekeli (2021), found out in his study that in the effect of professional identification on psychological resilience, self-efficacy played a mediating role. Hirschi (2012), examined the relationship between job commitment, professional identification and professional self-efficacy and found that professional identification mediated the association between self-evaluation and work commitment. However, the identification process starts before the individual is accepted to a profession in a professional sense. This process usually starts in a school where formal and practical education is received. In addition, identification is further developed through practices in the workplace (Lui et al., 2003). In this context, based on the researches conducted and the results obtained, H2 is designed as follows.

H2. Psychological resilience has a positive and significant effect on professional identification.

3.3 Psychological Resilience - Occupational Identification - Technostress

According to the results of Bartels et al. (2010), a positive association exists between occupational and organisational identification, but employees identify stronger more strongly within their occupation compared to their organisation. On the other hand, informal communication with colleagues is the most important determinant of professional identification. Loi and Hang-Yue (2004) examined the impact of occupational engagement on job satisfaction, commitment to the organisation and career satisfaction and found that occupational identification has an important positive effect over both job satisfaction and organisational commitment and occupational gender moderates the association between occupational engagement-job satisfaction and occupational identification-organisational commitment. Erdem (2020), found in his study that there is a negative relationship between burnout and professional identification. Also according to the results of the study, high level of professional identification reduces the perception

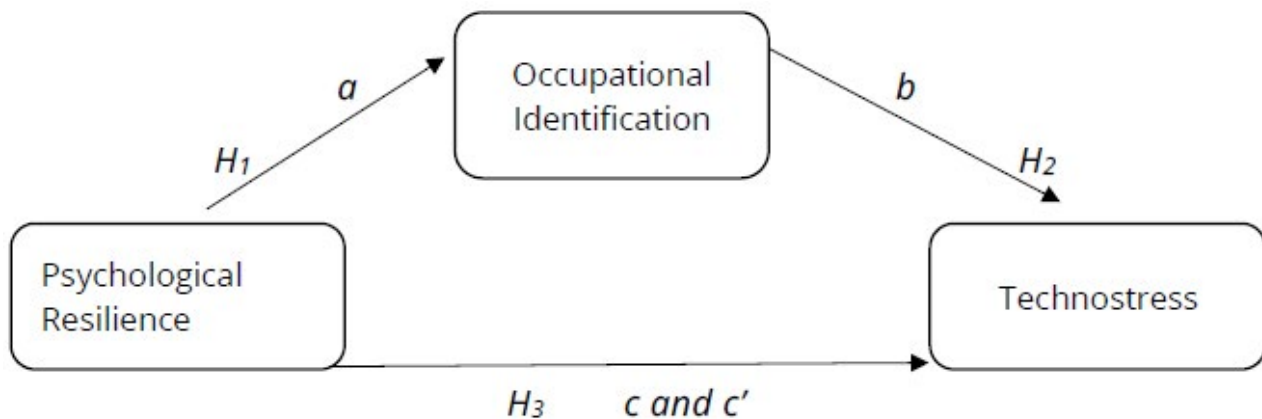
of burnout. On the other hand, as information and communications technologies become widespread and are used in every field, it becomes necessary for individuals to constantly deal with these technologies in order to be successful in their jobs (Ayyagari et al., 2011). However, it has been shown in the literature that the stress (technostress) arising due to the information and communication technologies is related to organisational commitment, turnover intention and work fatigue problems (Ahuja et al., 2007; Ayyagari et al., 2011). Based on the literature review, empirical results and the effects of professional identification on employees' psychological states and the increasing importance of technology use, H3 is designed as follows:

H3. Occupational identification plays a mediating role in the effect of psychological resilience on technostress.

4. Method

This study has been designed in accordance with the causal screening model. In this context, in this section of the research, the aim and importance of the study, population and sample information and detailed information about the research scales are given. Firstly, the exploratory and confirmatory factor analyses were conducted for scales within the scope of the research, and correlation values and internal consistency coefficients between factors were calculated. Then, regression analyses were performed according to the research model. The research model and the hypotheses tested within the context of the research are shown in Figure 1.

Figure 1. Research Hypotheses and Model



Source: Own Elaboration

4.1 Design and Sampling

In this study, the number of students enrolled in vocational high schools in Gaziantep was taken into consideration to determine the sampling frame. Total students registered to vocational high schools providing education in the field of tourism in Gaziantep is 609. Accordingly, the sample size calculated by taking into account the 5% margin of error within the scope of 95% reliability limits from the main mass is 237. In this context, the survey application was conducted with 417 students reached by convenience sampling method. Incomplete or incorrectly completed 24 questionnaire forms were not included in the analyses and the analyses were carried out on 393 questionnaire forms.

4.2 Instruments and Procedure

In the present study, questionnaire technique was used to collect data in order to test the mediating effect of professional identification on the effect of psychological resilience on technostress. In the first part of

the questionnaire form consisting of four sections, there are six statements related to psychological resilience, three statements related to occupational identification in the second part, and thirteen statements related to technostress in the fourth part. Within the scope of the study, pilot application was conducted with eighty respondents before the main application, and no negativity was encountered regarding the comprehensibility of the questions during the pilot application. In the internal consistency analysis conducted for the pilot application data, Cronbach Alpha coefficient was calculated as 0.776. Sample questionnaire statements about psychological resilience, professional identification and technostress are as follows "I can recover quickly from difficult times, I get through difficult times with little distress; I like it when others praise my profession, I don't like it when others criticise my profession; I feel stressed about adapting to technology, I find it difficult to keep up with the constant innovations brought by technology with my current skills." Information on the validity and reliability data of the scales used in the measurements are as follows:

Psychological Resilience Scale: The independent variable of this study is psychological resilience. For the measurement of this variable, the short psychological resilience scale, which originally belongs to Smith et al. (2008), and whose validity, reliability and adaption into Turkish was conducted by Dogan (2015), was used. The scale's Cronbach Alpha was calculated as 0.83. According to the exploratory factor analysis results, a single-factor structure explaining 54% of the total variance was obtained. According to the confirmatory factor analysis results, it is seen that the goodness of fit values (*NFI*: 0.99; *CFI*: 0.99; *GFI*: 0.99; *AGFI*: 0.96; *RMSEA*: 0.05) have the desired range values.

Since the psychological resilience scale which was used in the measurement within the scope of the study had a one-factor structure, it was not subjected to exploratory factor analysis, and the scale in question under one factor was subjected to confirmatory factor analysis and the fit goodness of fit values related to confirmatory factor analysis are presented in Table 1.

Technostress Scale: The dependent variable of this study is technostress. For the measurement of this variable, the scale of technostress, which was originally designed by Wang et al. (2020) and conducted by Bas et al. (2021) for Turkish validity and reliability, was used. The scale's Cronbach Alpha coefficient has been calculated as 0.93. According to the results of confirmatory factor analysis, it is observed that the values of goodness of fit (*NFI*: 0.98; *CFI*: 0.98; *GFI*: 0.93; *AGFI*: 0.90; *RMSEA*: 0.07) have the desired range values.

Within the scope of the research, before proceeding towards an exploratory factor analysis for the technostress scale, the technostress scale, which is the dependent variable of the research, was subjected to normality and linearity tests in order to identify its structural validity. It was observed that the kurtosis and skewness values of the scale in question (Kurtosis: 0.208 Skewness: -.010) met the condition of being in the range of +1 and -1. KMO and Bartlett Sphericity tests were performed to determine whether the scale in question fulfils the conditions of multivariate normal distribution. Accordingly, the KMO value was calculated as $\alpha = 0.797$ and Bartlett Sphericity analysis results (χ^2 : 639,696 dd: 55 p: 0.000 $p < 0.05$), thus it was determined that the scale met the multivariate normal distribution conditions. In addition, it was seen that the three-factor structure with factor loadings ranging between 0.404 and 0.835 explained 49.809% of the total variance. The original technostress scale has a two-factor structure. However, since a three-factor structure was reached in the factor analysis, the factors were named as PT (ability-demand mismatch), IT (need-supply mismatch) and IE (need-training environment mismatch). Furthermore, internal consistency analysis revealed that the scale's Cronbach's Alpha coefficient was calculated as 0.782. Accordingly, it can be said that the scale is highly reliable. In addition, the technostress scale was subjected to confirmatory factor analysis and the goodness of fit values related to confirmatory factor analysis are shown in Table 1.

Occupational Identification Scale: The mediating variable of this research is occupational identification. For the measurement of this variable, the professional identification scale prepared by Kirkbesoglu and Tuzun (2009), by making use of the study conducted by Mael and Ashforth (1998), was used. Cronbach Alpha coefficient of the scale was calculated as 0.71. The scale in question consists of one factor.

The scale of professional identification used in the measurement within the scope of the research was not subjected to an exploratory factor analysis because it had a single factor structure, the scale in question under one factor was subjected to confirmatory factor analysis and confirmatory factor analysis fit goodness of fit values are shown in Table 1.

Table 1. Goodness of Fit Values for Confirmatory Factor Analysis

Scales	Level 1	Level 2
Technostress		
<i>CMIN/DF</i>	2,315	2,316
<i>GFI</i>	0,957	0,965
<i>AGFI</i>	0,931	0,937
<i>CFI</i>	0,909	0,909
<i>RMSEA</i>	0,058	0,058
<i>p</i>	0,000	0,000
Psychological Resilience		
<i>CMIN/DF</i>	3,726	
<i>GFI</i>	0,978	
<i>AGFI</i>	0,933	
CFI	0,805	
<i>RMSEA</i>	0,082	
<i>p</i>	0,000	
Occupational Identification		
<i>CMIN/DF</i>	4,714	
<i>GFI</i>	0,980	
<i>AGFI</i>	0,995	
<i>CFI</i>	0,990	
<i>RMSEA</i>	0,082	
<i>p</i>	0,000	
Acceptable fit		
<i>CMIN/DF</i> : < 3-5 <i>GFI</i> : > 0,85 <i>AGFI</i> : > 0,80 <i>CFI</i> : > 0,85 <i>RMSEA</i> : < 0,08		
Good fit		
<i>CMIN/DF</i> : < 3 <i>GFI</i> : > 0,90 <i>AGFI</i> : > 0,80 <i>CFI</i> : > 0,95 <i>RMSEA</i> : < 0,05		

Source: Own Elaboration

5. Findings

The data obtained within the scope of the research are subjected to statistical analyses kept. In this section, firstly, demographic findings for the participants are given. Then, the results obtained in regression analyses related to correlation calculations between factors and hypothesis tests are presented under separate headings.

5.1 Demographic Findings

Of the 393 high school students who participated in the study, 67.2% (n=264) were female and 32.8% (n=129) were male. In addition, 22.4% (n=88) of the students were in ninth grade, 31% (n=122) were in tenth grade, 36.9% (n=145) were in eleventh grade, and 9.7% (n=38) were in twelfth grade. On the other hand, 88.5% (n=348) of the participants in the study were students who had not completed their internship, 8.4% (n=33) were students who had completed their internship and 3.1% (n=12) were students whose internship was ongoing.

5.2 Correlation Analysis

Within the scope of the study, the arithmetic mean, standard deviation and correlation results of the factors expressing the technostress status of the participants and the factors expressing their psychological resilience and professional identification are shown in Table 2.

Table 2. Arithmetic Mean, Standard Deviation Correlation Values for Scale Factors

Variables	Mean	s.d.	1	2	3	4	5
1.Techno/YT	2,89	0,71	(0,65)				
2.Techno/IT	2,87	0,91	0,426**	(0,59)			
3.Techno/IE	2,79	1,01	0,315**	0,293**	(0,53)		
4. Resilience	2,99	0,66	-0,253**	-0,134**	-0,146**	(0,43)	
5. Identification	3,06	1,11	0,084	0,117*	0,050	0,160**	(0,65)

Source: Own Elaboration

Table 2 shows that there are significant relationships between psychological resilience, which is accepted as an independent variable in the research, and technostress, which is accepted as a dependent variable. Therefore, although it is seen that there are significant relationships between the factors in general, it is seen that professional identification is not in a significant relationship with PT and PI, which are technostress factors.

5.3 Regression Analysis for Mediation Effect

In order to test whether professional identification has a mediating role in the effect of psychological resilience on technostress, regression analysis based on the bootstrap method was performed. The Bootstrap method provides more credible results than the conventional approach (Gurbuz, 2019). In this context, the analyses were conducted using the Process macro developed by Hayes et al. (2018). In the mediation effect analysis conducted with the Bootstrap technique, 5000 resampling option was preferred. In this direction, in order for the mediation effect hypothesis formed within the scope of the research to be supported, the CI value should not contain a zero value in the 95% confidence interval. The results of the analyses conducted in this direction are presented in Table 3, Table 4 and Table 5.

Table 3. Regression Analysis Results for Mediation Effect

		Result Variables				
		(M) Occupational Identification			(Y) Technostress (TDM)	
Estimation variables		<i>b</i>	<i>s.e.</i>		<i>b</i>	<i>s. e.</i>
X (PR)	<i>a</i> *	0,266	0,083	<i>c</i> *** <i>c</i> ***	-0,292 -0,271	0,052 0,52
M (OI)	-	-	-	<i>b</i> *	0,081	0,031
Constant	<i>im</i>	2,267	0,255	<i>iy</i>	3,524	0,175
		<i>R</i> ² =0,025			<i>R</i> ² =0,079	
		<i>F</i> (1/391)=10,214			<i>F</i> (2/390)=16,902	
Indirect Effect	0,217 (0,0026 / 0,0487)					

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$ s.e. Standart Error

Source: Own Elaboration

According to Table 3, it was found that the indirect effect of psychological resilience on talent demand mismatch, one of the technostress factors, was significant and thus, occupational identification mediated the association between psychological resilience and talent demand mismatch, one of the technostress factors ($b=0,217$ 95% *BCI CI* [0,0026 / 0,0487]). According to the results of the analyses, (*BCI-CI*) interval values do not contain 0 (zero) value.

Table 4. Regression Analysis Results for Mediation Effect

Estimation variables	Result Variables					
	(M) Occupational Identification			(Y) Technostress (NDM)		
		<i>b</i>	<i>s. e.</i>		<i>b</i>	<i>s. e.</i>
X (PR)	a^*	0,266	0,083	c^{***}	-0,213	0,068
				c^*	-0,182	0,068
M (OI)	-	-	-	b^{**}	0,115	0,041
Constant	<i>im</i>	2,267	0,255	<i>iy</i>	3,159	0,227
		$R^2 = 0,025$			$R^2 = 0,037$	
		$F(1/391)=10,214$			$F(2/390)=7,6539$	
Indirect Effect	0,0339 (0,0044 / 0,0735)					

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$ s.e. Standart Error

Source: Own Elaboration

According to Table 4, it was found that the indirect effect of psychological resilience on need-demand mismatch, one of the technostress factors, was significant and thus, occupational identification mediated the association between psychological resilience and ability-demand mismatch, one of the technostress factors ($b=0,339$ 95% *BCI-CI* [0,0044 / 0,0735]). According to the results of the analysis (*BCI-CI*) interval values do not include 0 (zero) value.

Table 5. Regression Analysis Results for the Effect

Estimation variables	Result Variables					
	(M) Occupational Identification			(Y) Technostress (NTM)		
		<i>b</i>	<i>s.e.</i>		<i>b</i>	<i>s. e.</i>
X (PR)	a^*	0,266	0,083	c^{***}	-0,240	0,076
				c^*	-0,222	0,076
M (OI)	-	-	-	b	0,068	0,046
Constant	<i>im</i>	2,267	0,255	<i>iy</i>	3,309	0,255
		$R^2 = 0,025$			$R^2 = 0,027$	
		$F(1/391)=10,214$			$F(2/390)=5,4062$	
Indirect Effect	0,0183 (-0,0070 / 0,0509)					

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$ s.e. Standart Error

Source: Own Elaboration

According to Table 5, the mediating effect of psychological resilience on need-training mismatch, one of the technostress factors, was found to be significant. However, it was found that professional identification cannot play a mediating role in the relationship between resilience and need-training environment dissonance, one of the technostress factors ($b=0,0183$ 95% *BCA CI* [- 0,0070 / 0,0509]). According to the results of the analysis, (*BCA CI*) interval values contain 0 (zero) value.

6. Discussion

The use of technology in the tourism sector, which is one of the largest industries worldwide, is becoming more and more widespread in terms of both tourists and employees. In the tourism sector, which is described as labour-intensive, the automation and intensive use of technology seen with Industry 4.0 has inevitably brought the issue of having and managing human resources that can master and use these technologies to an even more important point. In this context, it can be argued that businesses that have employees with high psychological resilience and employees who are identified with their professions will provide competitive advantage in the tourism sector despite the technostress that occurs with the intensive use of technology. The findings of the study are consistent with the social cognitive theory proposed by Bandura (1986) and supported by Christenson et al. (2012). Accordingly, students who have self-efficacy in the context of psychological resilience have a better sense of control and involvement in learning activities. The results obtained also coincide with Gushue et al. (2006) in the context of self-efficacy theory. Gushue et al. (2006) found that self-efficacy significantly predicts professional identity development. In addition, students with self-efficacy tend to understand themselves better. As a result of this research, it was determined that students with high levels of psychological resilience were less exposed to technostress. Therefore, the technostress level of vocational high school students with high psychological resilience level is low. This result coincides with the results of other studies investigating the effect of psychological resilience on stress in the literature. Kosaka (1996), in his research, found that psychological resilience minimises the negative effects of stress. In addition, individuals with high levels of psychological resilience plan their lives more clearly and see negative situations as an opportunity rather than seeing stressful situations as a threat. Smith et al. (2010), in their research, found that psychological resilience reduces the perceived stress level. Therefore, it is possible to say that the concept of psychological resilience is effective on technostress similar to its effect on stress. On the other hand, while psychological resilience has positive effects on job satisfaction and life satisfaction of employees in different occupational groups (Basım & Cetin, 2011; McCann et al., 2013; Itzhaki et al., 2015), it has negative effects on turnover intention and burnout (Wang et al., 2012; Peng et al., 2013; Altan, 2019). In the study, it was determined that psychological resilience positively affects professional identification. This result supports the results of the study conducted by Tekeli et al. (2021). According to the results of the aforementioned research, professional identification has significant positive effects on psychological resilience.

7. Conclusion

In this study, which was conducted to determine the mediating role of professional identification in the effect of psychological resilience on technostress in the context of professional well-being in tourism education, important results were reached. In this context, analyses were carried out through SPSS 23 and IBM AMOS 23 package programmes. The results were evaluated through correlation values, internal consistency coefficients, inter-factor correlation calculations and regression analyses related to hypothesis tests. According to the analyses performed within the scope of the model created within the scope of the research, it was determined that psychological resilience has significant negative effects on technostress. Accordingly, H1 hypothesis was confirmed. Therefore, increasing psychological resilience decreases the level of technostress. Another important result obtained within the scope of this research is that psychological resilience has a positive effect on professional identification. Accordingly, hypothesis H2 was confirmed. A high level of psychological resilience in terms of students also increases professional identification. Within the scope of the research, it was determined that the factors that constitute psychological resilience have an indirect effect on technostress through professional identification, and important evidence was obtained for the confirmation of hypothesis H3. Therefore, professional identification mediates the relationship between psychological resilience and technostress.

7.1 Theoretical Implications

This article contributes to the self-efficacy theory and technology acceptance model from the perspective of tourism education. Especially psychological resilience, which is an important part of the cognitive whole

emphasised in self-efficacy theory, has important implications on professional identification. Within the scope of the research, psychological resilience, professional identification and technostress variables were included in the same model. In this direction, the reducing effect of psychological resilience and professional identification on technostress was revealed.

7.2 Practical Implications

Based on the results of this research, it is evaluated that the increasing use of technology in the tourism sector will form the basis for preventive approaches to be developed against the stress situations arising from the use of technology by current employees and students who will be employed in the future in enterprises. In this context, digital development and the ever-increasing use of technology make it necessary to empower tourism sector employees and prospective employees against a number of difficulties that are likely to occur in the use of technology. On the other hand, this research is expected to contribute to the development of plans and policies for the identification of these students with their professions and the increase of their psychological resilience levels, based on the knowledge that tourism vocational high school students with high psychological resilience levels will be more resilient in overcoming the difficulties they will face in their future business life.

7.3 Limitations and Future Research

As in every research, this research has some limitations. In this study, psychological resilience, occupational identification and technostress of tourism students were focused. Future research should consider employees based on a certain active working time. In addition, it is considered that it would be useful to examine the managerial factors that cause a decrease in psychological resilience in the tourism sector.

REFERENCES

- Adams, D. A., Nelson, R. R., & Todd, P. A. (1992). Perceived usefulness, ease of use, and usage of information technology: a replication. *MIS Quarterly*, 16(2), 227-47.
- Alam, M. A. (2016). Techno-stress and productivity: Survey evidence from the aviation industry. *Journal of Air Transport Management*, 50, 62-70. <https://doi.org/10.1016/j.jairtraman.2015.10.003>
- Altan, S. (2019). The Effect of Psychological Resilience on Turnover Intention: Mediating Role of Organisational Citizenship Behaviour. *Eurasian Journal of Social and Economic Research*, 3, 612-629.
- Amir, M. T., & Standen, P. (2019). Growth-focused resilience: development and validation of a new scale. *Management Research Review*, 42(6), 681-702. <https://doi.org/10.1108/MRR-04-2018-0151>
- Ahuja, M. K., Chudoba, K. M., Kacmar, C. J., McKnight, D. H., & George, J. F. (2007). IT Road Warriors: Balancing Work- Family Conflict, Job Autonomy, and Work Overload to Mitigate Turnover Intentions. *MIS Quarterly*, 31(1), 1-17. <https://doi.org/10.2307/25148778>
- Al-Fudail, M., & Mellar, H. (2008). Investigating teacher stress when using technology. *Computers & Education*, 51(3), 1103-1110. <https://doi.org/10.1016/j.compedu.2007.11.004>
- Apker, J., & Fox, D. H. (2002). Communication: improving RNs' organizational and professional identification in managed care hospitals. *JONA: The Journal of Nursing Administration*, 32(2), 106-114.
- Ashforth, B. E., & Mael, F. (1989). Social identity theory and the organization. *Academy of Management Review*, 14(1), 20-39. <https://doi.org/10.5465/amr.1989.4278999>
- Ayyagari, R., Grover, V., & Purvis, R. (2011). Technostress: Technological antecedents and implications. *MIS Quarterly*, 35(4), 831-858. <https://doi.org/10.2307/41409963>
- Bandura, A., & Adams, N. E. (1977). Analysis of self-efficacy theory of behavioral change. *Cognitive therapy and research*, 1(4), 287-310.
- Bandura, A. (1986). *Foundations of thought and action: A social cognitive theory*. Prentice-Hall.
- Bandura, A. (1994). Self-Efficacy. In Ramachaudran (Ed.), *The Encyclopedia of Human Behavior* (Vol. 4, R-Z and Index, pp. 71- 81). AcademicPress.
- Bandura, A. (1997). *Self-Efficacy. The Exercise of Control*. Freeman.
- Bandura, A. (2006). Guide for constructing self-efficacy scales. *Self-efficacy beliefs of adolescents*, 5(1), 307-337.
- Bandura, A. (2012). On the functional properties of perceived self-efficacy revisited. *Journal of Management*, 38, 9-44.

- Bartels, J. O., Peters, M. de Jong, Pruyn, A., & van der Molen, M. (2010). Horizontal and Vertical Communication as Determinants of Professional and Organisational Identification. *Personnel Review*, 39(2), 210-226. <https://doi.org/10.1108/00483481011017426>
- Brochado, A., Rita, P., & Margarido, A. (2016). High tech meets high touch in upscale hotels. *Journal of Hospitality and Tourism Technology*, 7(4), 347-365. <https://doi.org/10.1108/JHTT-07-2016-0038>
- Brod, C. (1984). *Technostress: The human cost of the computer revolution*. Addison-Wesley.
- Bas, M., Balaman, F., & Balci, S. (2021). Turkish Adaptation of the Level of Technostress in the Technology-Supported Learning Environment of University Students: A Validity - Reliability Study. *EKEV Academy Journal*, 25(87), 451-470.
- Basim, H. N., & Cetin, F. (2011). Reliability and validity study of psychological resilience scale for adults. *Turkish Journal of Psychiatry*, 22(2), 104-114.
- Burton, N. W., Pakenham, K. I., & Brown, W. J. (2010). Feasibility and effectiveness of psychosocial resilience training: a pilot study of the READY program. *Psychology, Health & Medicine*, 15(3), 266-277. <https://doi.org/10.1080/13548501003758710>
- Bui, H. T., So, K. K. F., Kwek, A., & Rynne, J. (2017). The impacts of self-efficacy on academic performance: An investigation of domestic and international undergraduate students in hospitality and tourism. *Journal of Hospitality, Leisure, Sport & Tourism Education*, 20, 47-54. <https://doi.org/10.1016/j.jhlste.2017.02.002>
- Cao, W., Fang, Z., Hou, G., Han, M., Xu, X., & Dong, J. (2020). The psychological impact of the COVID-19 epidemic on college students in China. *Journal of Psychiatry Research*, 287, Article 112934. <https://doi.org/10.1016/j.psychres.2020.112934>
- Cherian, J., & Jacob, J. (2013). Impact of self efficacy on motivation and performance of employees. *International Journal of Business and Management*, 8(14), 80-88. <http://dx.doi.org/10.5539/ijbm.v8n14p80>
- Christenson, S. L., Reschly, A. L., & Wylie, C. (Eds.) (2012). *Handbook of research on student engagement*. Springer US.
- Cobanoglu, C., Berezina, K., Kasavana, M. L., & Erdem, M. (2011). The impact of technology amenities on hotel guest overall satisfaction. *Journal of Quality Assurance in Hospitality & Tourism*, 12(4), 272-288. <https://doi.org/10.1080/1528008X.2011.541842>
- Compeau, D. R., & Higgins, C. A. (1995). Computer self-efficacy: development of a measure and initial test. *MIS Quarterly*, 19(2), 189-211.
- Connor, K. M., & Davidson, J. R. (2003). Development of a new resilience scale: The Connor-Davidson resilience scale (CD-RISC). *Depression and Anxiety*, 18(2), 76-82. <https://doi.org/10.1002/da.10113>
- Davis, F. D. (1989). Technology acceptance model: TAM. *Al-Suqri, MN, Al-Aufi, AS: Information Seeking Behavior and Technology Adoption*, 205, Article 219.
- Dogan, T. (2015). Adaptation of the Brief Resilience Scale into Turkish: A validity and reliability study. *The Journal of Happiness & Well-Being*, 3(1), 93-102.
- Duzgun, M., & Celik, M. (2020). The moderator role of demographic variables in the effect of self-efficiency beliefs of tourism and hotels vocational school students on career expectations in tourism enterprises. *Cankiri Karatekin University Journal of the Faculty of Economics and Administrative Sciences*, 10(2), 475-507. <https://doi.org/10.18074/ckuiibfd.591802>
- Erdem, A. T. (2020). The mediating role of workload perception in the effect of professional identification on burnout: A research for nurses. *Gumushane University Journal of Social Sciences*, 11, 89-103.
- Fishbein, M., & Ajzen, I. (1975). *Belief, Attitude, Intention and Behaviour: An Introduction to Theory and Research*. Addison-Wesley.
- Foreman, P., & Whetten, D. A. (2002). Members' identification with multiple-identity organizations. *Organization Science*, 13(6), 618-635. <https://doi.org/10.1287/orsc.13.6.618.493>
- Gardner, T. W., Dishion, T. J., & Connell, A. M. (2008). Adolescent self-regulation as resilience: resistance to antisocial behavior within the deviant peer context. *Journal of Abnormal Child Psychology*, 36(2), 273-284.
- Garg, N., & Sarkar, A. (2020). Vitality among university students: exploring the role of gratitude and resilience. *Journal of Organizational Effectiveness: People and Performance*, 7(3), 321-337. <https://doi.org/10.1108/JOEPP-03-2020-0041>
- Gurbuz, S. (2019). *Mediating Regulatory and Situational Mediating Effect Analyses in Social Sciences*. Seckin Publishing.
- Gushue, G. V., Scanlan, K. R., Pantzer, K. M., & Clarke, C. P. (2006). The relationship of career decision-making self-efficacy, vocational identity, and career exploration behavior in African American high school students. *Journal of Career Development*, 33(1), 19-28.
- Hayes, S. C., & Hofmann, S. G. (Eds.). (2018). *Process-based CBT: The science and core clinical competencies of cognitive behavioral therapy*. New Harbinger Publications.
- Hirschi, A. (2012). Callings and work engagement: moderated mediation model of work meaningfulness, occupational identity, and occupational self-efficacy. *Journal of Counseling Psychology*, 59(3), Article 479. <https://doi.org/10.1037/a0028949>
- Hu, T., Zhang, D., & Wang, J. (2015). A meta-analysis of the trait resilience and mental health. *Personality and Individual Differences*, 76, 18-27. <https://doi.org/10.1016/j.paid.2014.11.039>

- Husky, M. M., Kovess-Masfety, V., & Swendsen, J. D. (2020). Stress and anxiety among university students in France during Covid-19 mandatory confinement. *Comprehensive Psychiatry*, 102, Article 152191. <https://doi.org/10.1016/j.comppsy.2020.152191>
- Hwang, I., & Cha, O. (2018). Examining technostress creators and role stress as potential threats to employees' information security compliance. *Computers in Human Behavior*, 81, 282-293. <https://doi.org/10.1016/j.chb.2017.12.022>
- Itzhaki, M., Peles-Bortz, A., Kostitsky, H., Barnoy, D., Filshinsky, V., & Bluvstein, I. (2015). Exposure of mental health nurses to violence associated with job stress, life satisfaction, staff resilience, and post-traumatic growth. *International Journal of Mental Health Nursing*, 24(5), 403-412. <https://doi.org/10.1111/inm.12151>
- Ivanov, S., Webster, C., & Garenko, A. (2018). Young Russian adults' attitudes towards the potential use of robots in hotels. *Technology in Society*, 55, 24-32. <https://doi.org/10.1016/j.techsoc.2018.06.004>
- Jafari, A., Amiri Majd, M., & Esfandiary, Z. (2013). Relationship between personality characteristics and coping strategies with job stress in nurses. *Quarterly Journal of Nursing Management*, 1(4), 36-44.
- Jena, R. (2015). Technostress in ICT enabled collaborative learning environment: An empirical study among Indian academicians. *Computers in Human Behavior*, 51, 1116-1123. <https://doi.org/10.1016/j.chb.2015.03.020>
- Joo, Y. J., Lim, K. Y., & Kim, N. H. (2016). The effects of secondary teachers' technostress on the intention to use technology in South Korea. *Computers & Education*, 95, 114-122. <http://dx.doi.org/10.1016/j.compedu.2015.12.004>
- Kirkbesoglu, E., & Tuzun, İ. K. (2009). The effect of individualistic/collectivistic tendency on occupational and organizational identification. *Journal of Organization and Management Sciences*, 1(2), 1-8.
- Kosaka, M. (1996). Relationship between hardiness and psychological stress response. *Journal of Performance Studies*, 3, 35-40.
- Kuo, C. M., Chen, L. C., & Tseng, C. Y. (2017). Investigating an innovative service with hospitality robots. *International Journal of Contemporary Hospitality Management*, 29(5), 1305-1321. <https://doi.org/10.1108/IJCHM-08-2015-0414>
- Komorco, S., Ertamay, S. İ., & Güler, M. E. (2021). Impacts of technological development on employment structure of tourism industry. *Journal of Management and Economics Research*, 19(1), 146-165. <https://doi.org/10.11611/yea.814765>
- Leandro, P., & Castillo, M. (2010). Coping with stress and its relationship with personality dimensions, anxiety, and depression. *Procedia – Social and Behavioral Sciences*, 5, 1562-1573. <https://doi.org/10.1016/j.sbspro.2010.07.326>
- Leung, L. (2011). Effects of ICT connectedness, permeability, flexibility, and negative spillovers on burnout and job and family satisfaction. *Human Technology: An Interdisciplinary Journal on Humans in ICT Environments*, 7(3), 250-267. <https://doi.org/10.17011/ht/urn.2011112211714>
- Leung, M. Y., Shan Isabelle Chan, Y., & Dongyu, C. (2011). Structural linear relationships between job stress, burnout, physiological stress, and performance of construction project managers. *Engineering Construction and Architectural Management*, 18(3), 312-328. <https://doi.org/10.1108/09699981111126205>
- Loi, R., Hang-yue, N., & Foley, S. (2004). The effect of professional identification on job attitudes: A study of lawyers in Hong Kong. *Organizational Analysis*, 12(2), 109-128. <https://doi.org/10.1108/eb028988>
- Lui, S. S., Ngo, H. Y., & Tsang, A. W. N. (2003). Socialized to be a professional: A study of the professionalism of accountants in Hong Kong. *The International Journal of Human Resource Management*, 14(7), 1192-1205.
- MacArthur, B. L., Dailey, S. L., & Villagran, M. M. (2016). Understanding healthcare providers' professional identification: the role of interprofessional communication in the vocational socialization of physicians. *Journal of Interprofessional Education & Practice*, 5, 11-17. <https://doi.org/10.1016/j.xjep.2016.09.001>
- Markman, G. D., Balkin, D. B., & Baron, R. A. (2002). Inventors and new venture formation: The effects of general self-efficacy and regretful thinking. *Entrepreneurship theory and practice*, 27(2), 149-165.
- Mael, F., & Ashforth, B. E. (1992). Alumni and their alma mater: A partial test of the reformulated model of organizational identification. *Journal of Organizational Behavior*, 13(2), 103-123.
- Mathieson, K. (1991). Predicting user intentions: comparing the technology acceptance model with the theory of planned behavior. *Information Systems Research*, 2(3), 173-191.
- Mayor-Silva, L. I., Romero-Saldaña, M., Moreno-Pimentel, A. G., Álvarez-Melcón, Á., Molina-Luque, R., & Meneses-Monroy, A. (2021). The role of psychological variables in improving resilience: Comparison of an online intervention with a face-to-face intervention. A randomised controlled clinical trial in students of health sciences. *Nurse Education Today*, 99, Article 104778. <https://doi.org/10.1016/j.nedt.2021.104778>
- McCann, C. M., Beddoe, E., McCormick, K., Huggard, P., Kedge, S., Adamson, C., & Huggard, J. (2013). Resilience in the health professions: A review of recent literature. *International Journal of Wellbeing*, 3(1), 60-81. <https://doi.org/10.5502/ijw.v3i1>
- Moon, J. W., & Kim, Y. G. (2001). Extending the TAM for a world wide web context. *Information & Management*, 38(4), 217-230. [https://doi.org/10.1016/S0378-7206\(00\)00061-6](https://doi.org/10.1016/S0378-7206(00)00061-6)
- Moreno, A., Navarro, C., Molleda, J. C., & Fuentes-Lara, M. C. (2019). Measurement and predictors of resilience among Latin American public relations professionals: An application of the Connor-Davidson Resilience Scale (CD-RISC). *Journal of Communication Management*, 23(4), 393-411. <https://doi.org/10.1108/JCOM-01-2019-0004>

- Neville, V., Joscellyne, T., & Chester, J. (2019). A review of school approaches to increasing pupil resilience. *Journal of Public Mental Health*, 18(1), 26-37. <https://doi.org/10.1108/JPMH-03-2018-0020>
- Perea Monsuwe, T., Dellaert, B. G. C., & de Ruyter, K. (2004). What drives consumers to shop online? A literature review. *International Journal of Service Industry Management*, 15(1), 102-121.
- Peng, J., Jiang, X., Zhang, J., Xiao, R., Song, Y., Feng, X., & Miao, D. (2013). The impact of psychological capital on job burnout of Chinese nurses: the mediator role of organizational commitment. *PloS one*, 8(12), Article e84193. <https://doi.org/10.1371/journal.pone.0084193>
- Peng, Y., & Wang, Q. (2020). The impact of mindful agency coaching and motivational interviewing on the development of positive learning dispositions in undergraduate students: A quasi experimental intervention study. *Journal of Educational and Psychological Consultation*, 30(1), 63-89. <https://doi.org/10.1080/10474412.2019.1598266>
- Pihie, Z. A. L., & Bagheri, A. (2010). Entrepreneurial attitude and entrepreneurial efficacy of technical secondary school students. *Journal of Vocational Education and Training*, 62(3), 351-366.
- Ragu-Nathan, T. S., Tarafdar, M., Ragu-Nathan, B. S., & Tu, Q. (2008). The consequences of technostress for end users in organizations: Conceptual development and empirical validation. *Information Systems Research*, 19(4), 417-433. <https://doi.org/10.1287/isre.1070.0165>
- Ran, L., Wang, W., Ai, M., Kong, Y., Chen, J., & Kuang, L. (2020). Psychological resilience, depression, anxiety, and somatization symptoms in response to COVID-19: A study of the general population in China at the peak of its epidemic. *Social Science & Medicine*, 262, Article 113261. <https://doi.org/10.1016/j.socscimed.2020.113261>
- Reeve, J., & Tseng, C.-M. (2011). Agency as a fourth aspect of students' engagement during learning activities. *Contemporary Educational Psychology*, 36(4), 257-267. <https://doi.org/10.1016/j.cedpsych.2011.05.002>
- Saltık, Z., & Kızılırmak, İ (2020). The Assessment of Stress Management and Psychological Hardiness of Professional Tourist Guides. *Journal of Travel and Hospitality Management*, 17(1), 53-70. <https://doi.org/10.24010/soid.713557>
- Shu, Q., Tu, Q., & Wang, K. (2011). The impact of computer self-efficacy and technology dependence on computer-related technostress: A social cognitive theory perspective. *International Journal of Human-Computer Interaction*, 27(10), 923-939. <https://doi.org/10.1080/10447318.2011.555313>
- Skovholt, T. M., Grier, T. L., & Hanson, M. R. (2001). Career counseling for longevity: self-care and burnout prevention strategies for counselor resilience. *Journal of Career Development*, 27(3), 167-176. <https://doi.org/10.1177/089484530102700303>
- Smith, B. W., Tooley, E. M., Christopher, P. J., & Kay, V. S. (2010). Resilience as the ability to bounce back from stress: A neglected personal resource? *The Journal of Positive Psychology*, 5(3), 166-176. <https://doi.org/10.1080/17439760.2010.482186>
- Srivastava, S. C., Chandra, S., & Shirish, A. (2015). Technostress creators and job outcomes: theorising the moderating influence of personality traits. *Information Systems Journal*, 25(4), 355-401. <https://doi.org/10.1111/isj.12067>
- Souri, H., & Hasanirad, T. (2011). Relationship between resilience, optimism and psychological well-being in students of medicine. *Procedia-Social and Behavioral Sciences*, 30, 1541-1544. <https://doi.org/10.1016/J.SBSPRO.2011.10.299>
- Suh, A., & Lee, J. (2017). Understanding teleworkers' technostress and its influence on job satisfaction. *Internet Research*, 27(1), 140-159. <https://doi.org/10.1108/IntR-06-2015-0181>
- Sundarasan, S., Chinna, K., Kamaludin, K., Nurunnabi, M., Baloch, G. M., Khoshaim, H. B., et al. (2020). Psychological impact of COVID-19 and lockdown among university students in Malaysia: Implications and policy recommendations. *International Journal of Environmental Research and Public Health*, 17, Article 6206. <https://doi.org/10.3390/ijerph17176206>
- Masten, A. S., Best, K. M., & Garmezy, N. (1990). Resilience and development: Contributions from the study of children who overcome adversity. *Development and Psychopathology*, 2(4), 425-444. <https://doi.org/10.1017/S0954579400005812>
- Tarafdar, M., Tu, Q., Ragu-Nathan, B. S., & Ragu-Nathan, T. S. (2007). The impact of technostress on role stress and productivity. *Journal of Management Information Systems*, 24(1), 301-328. <https://doi.org/10.2753/MIS0742-1222240109>
- Tarafdar, M., Tu, Q., & Ragu-Nathan, T. S. (2010). Impact of technostress on end-user satisfaction and performance. *Journal of Management Information Systems*, 27(3), 303-334. <https://doi.org/10.2753/MIS0742-1222270311>
- Tarafdar, M., Tu, Q., Ragu-Nathan, T., & Ragu-Nathan, B. S. (2011). Crossing to the dark side: examining creators, outcomes, and inhibitors of technostress. *Communications of the ACM*, 54(9), 113-120. <https://doi.org/10.1145/1995376.1995403>
- Tarafdar, M., Pullins, E. B., & Ragu-Nathan, T. S. (2015). Technostress: negative effect on performance and possible mitigations. *Information Systems Journal*, 25(2), 103-132. <https://doi.org/10.1111/isj.12042>
- Tarafdar, M., Cooper, C. L., & Stich, J. F. (2019). The technostress trifecta-techno eustress, techno distress and design: Theoretical directions and an agenda for research. *Information Systems Journal*, 29(1), 6-42. <https://doi.org/10.1111/isj.12169>
- Tak, B., Ciftcioğlu, B. A., & Topuz, E. (2009). The Results of Employees' Belonging to Their Organisations and Professions: An Empirical Study. In *17th National Management and Organisation Congress*, 21-23 May (pp. 488-490).
- Tekeli, E. K., Tekeli, M., & Özkoç, A. G. (2021). The Mediating Role of Self-Efficacy in the Effect of Professional Identification on Psychological Resilience: An Application for Tourist Guides. *Tourism Academic Journal*, 8(1), 263-279.
- Tiwari, V. (2021). Countering effects of technostress on productivity: Moderating role of proactive personality. *Benchmarking: An International Journal*, 28(2), 636-651. <https://doi.org/10.1108/BIJ-06-2020-0313>

- Tsai, C. T. S., Hsu, H., & Yang, C. C. (2017). Career decision self-efficacy plays a crucial role in hospitality undergraduates' internship efficacy and career preparation. *Journal of Hospitality, Leisure, Sport & Tourism Education*, 21, 61-68. <https://doi.org/10.1016/j.jhlste.2017.08.002>
- Tziner, A., Rabenu, E., Radomski, R., & Belkin, A. (2015). Work stress and turnover intentions among hospital physicians: The mediating role of burnout and work satisfaction. *Journal of Work and Organizational Psychology*, 31(3), 207-213. <https://doi.org/10.1016/j.rpto.2015.05.001>
- Qui, C. (2019). A double-edged sword? Exploring the impact of students' academic usage of mobile devices on technostress and academic performance. *Behaviour & Information Technology*, 38(12), 1337-1354. <https://doi.org/10.1080/0144929X.2019.1585476>
- Venkatesh, V., & Davis, F. D. (2000). A theoretical extension of the technology acceptance model: four longitudinal field studies. *Management Science*, 46(2), 186-204.
- Wang, Y., Liu, L., Wang, J. & Wang, L. (2012). Work-family conflict and burnout among Chinese doctors: the mediating role of psychological capital. *Journal of Occupational Health*, 54(3), 232-240. <https://doi.org/10.1539/joh.11-0243-OA>
- Wang, X., Tan, S. C., & Li, L. (2020). Technostress in university students' technology-enhanced learning: An investigation from multidimensional person-environment misfit. *Computers in Human Behavior*, 105, Article 106208. <https://doi.org/10.1016/j.chb.2019.106208>

ORCID

Mehmet Düzgün  <https://orcid.org/0000-0003-4318-0729>

Notes on contributors

Mehmet Düzgün is an associate professor teaching in the fields of gastronomy, tourism management and hotel management. He is the author of several research papers and book chapters focussing on careers in the tourism sector, regional cuisines and tourism education. He is an active reviewer and member of scientific journal editorial board. He is currently teaching at Gaziantep University and at schools affiliated to the Ministry of National Education of the Republic of Turkey.

Data availability: The data that support the findings of this study are available from the corresponding author upon request

Statement of Support and Acknowledgements: No support was utilised within the scope of the research. The researcher thank the participants is in the process of being implemented.

Determining the Ecological Citizenship Levels of Tourism Students: The Case of Eskişehir, Turkey

Dönüş Çiçek  ¹

Seher Gülenç  ²

Erdem Korkmaz  ³

1. Anadolu University, Eskişehir Vocational School Eskişehir, Turkey

2. Anadolu University, Faculty of Tourism, Eskişehir, Turkey

3. Anadolu University, Eskişehir Vocational School, Eskişehir, Turkey

ABSTRACT

We live in an era dominated by major environmental issues, for which countries try to bring solutions considering the philosophy of sustainability. As a concept concerning all humanity, ecological citizenship is regarded as an action to be taken to solve these problems. It is crucial for tourism students, who are prospective human resources for tourism industry, to have environmental awareness and act accordingly. This study aims to determine the ecological citizenship levels of tourism students, and their ecological citizenship level is analysed in terms of various factors. This study was designed with a correlational survey model, one of the quantitative research methods. The study group includes tourism students from Anadolu University and Eskişehir Osmangazi University in Eskişehir, enrolled in the 2022-2023 academic year. An “Ecological Citizenship Scale” was utilised in order to gathering data. The results of this study showed that tourism students had medium-level ecologic citizenship awareness. When considered in terms of variables/parameters, differences were found among all variables and dimensions. Finally, the students stated that the first three significant factors that had an influence on their ecological citizenship levels were family, education, and social media.

KEYWORDS

Sustainability, Ecological Citizenship, Ecological Awareness, Tourism Students.

ARTICLE HISTORY

Received 20 February 2024 Accepted 04 July 2024

1. Introduction

It is well known that current environmental problems pose a serious threat to the whole world. The climate crisis will not only create harmful impacts on ecosystems and people but also lead to substantial economic losses. For example, unless measures are taken to prevent climate-related natural disasters, it is estimated that by 2100, the annual cost of damage caused by floods in Europe will increase to 112 billion Euros (Baydemir, 2021). Due to globalization, environmental problems are no longer just local problems. People's perspectives on environmental policies and issues have changed, and the search for solutions has gone beyond national borders (Valencia Saiz, 2005). Scientists argue that environmental problems are generally related to human behavior, that attitudes, values, ethical rules, and perceptions lie at their root, and that they can be solved by changing individuals' perceptions of the environment and harmful behaviors towards nature as well as physical efforts (Vlek & Steg, 2007; Buko, 2009; Steg & Vlek, 2009; Han, 2021). In this context, there is a need for a new paradigm, encouraging active participation that focuses on solving environmental problems (Dobson, 2003; Buko, 2009; Jagers, 2009; Travaline & Hunold, 2010; Gül, 2013; Goldman et al., 2020; Bourban, 2023; Houmam & Aomar, 2023). One suggestion is "ecological citizenship" (Jagers, 2009; Zeng et al., 2016; Ünal, 2019; Goldman et al., 2020; Bourban, 2023; Houmam & Aomar, 2023). This is the idea of creating a new paradigm of citizenship that understands and adopts sustainable development and is sensitive to the environment (Dobson, 2007; D'Arco & Marino, 2022). Changes in the behavior of individuals are assumed to be a prerequisite for sustainable development (Dobson, 2007). Since the importance of protected natural areas, access to clean water, and organic agriculture to human life have been proven by scientific studies, individuals have started to become ecological citizens voluntarily to protect their own and their family's health (Bostancı & Yıldırım, 2019).

Ecological citizenship reduces individuals' environmental impact and legitimizes a sustainable lifestyle (Seyfang, 2006; Wolf et al., 2009). An ecological citizen acts with environmental awareness in daily activities, advocates for the fair use of ecological areas across international borders, and respects nature (Smith, 1998; Kennedy, 2011; Melo-Escrihuella, 2015). Bookchin (1996) posits that the expression of an individual as an ecological citizen is related to their concern for other people and the consequent adoption of a sustainable life. Based on environmental principles, it advocates the harmony of human behavior and the foundations of ecology (Karatekin & Uysal, 2018). According to Wolf et al. (2009), "ecological citizenship requires at least an acknowledgment of a citizen's relative environmental impact and, at best, efforts to reduce it" (p. 505). Therefore, ecological citizens act from a sustainable perspective to protect the environment now and for future generations, minimizing their environmental footprint (Nash & Lewis, 2006; Seyfang, 2006; Jagers et al., 2014; Granados-Sanchez, 2023).

According to Bourban (2023), ecological citizenship primarily involves changes in behavior and underlying attitudes rather than participation in political decision-making, setting the conditions for social cooperation. This is because sustainable changes in behavior do not result from social, economic, and political measures introduced by local or national governments but from individuals' voluntary changes in underlying attitudes. Policies that promote sustainability can modify behavior, but these changes often last no longer than the policies themselves, failing to alter people's underlying mindsets. However, changing individuals' attitudes can lead to more secure and longer-lasting modifications to behavior. One of the tools that can be used to change attitudes is education. In a study on how individuals, institutions, and organizations can change their behaviors for sustainable development, Dobson (2007) revealed that ecological behaviors can change, but attitudes do not always, with examples given of various financial incentives and barriers. The study found that citizenship education at the secondary school level can positively affect attitudes toward environmental/ecological citizenship. Tarrant and Lyons (2012) examined the impact of short-term educational travel programs on the environmental citizenship of students participating in international education programs within the framework of sustainable development in Australia and New Zealand, also identifying the effects of differences in crucial student characteristics, such as international education experience, gender, and program purpose, on citizenship. McMillan, Wright and Karen (2004) investigated the effects of taking a university-level environmental course on people's ecological values and concluded that the participants' environmental values deepened after the implementation.

While studies on how to best integrate sustainability into higher education can be found in the existing literature (Deale & Barber, 2012; Airey et al., 2015; Liasidou et al., 2019), it is essential to gather specific

information about ecological citizenship levels of tourism students in terms of sustainable tourism. Tourism, one of the largest industries in the world, causes significant environmental problems within the scope of sustainability from the goods and services it produces (Briassoulis, 2000; Gössling, 2002; Tandoğan & Genç, 2019). Furthermore, Lenzen et al. (2018) found that tourism's global carbon footprint increased from 3.9 to 4.5 GtCO₂ between 2009 and 2013, accounting for approximately 8% of global greenhouse gas emissions. Moreover, it is known that the tourism industry negatively impacts the physical, ecological, and social environment when people do not act in an environmentally responsible way. Some of the tourism industry, which constantly interacts with the environment, has acknowledged that it needs to act in harmony with nature and be more sensitive to the ecosystem. Consequently, public and private organizations have developed policies and implemented regulations. For example, the "Green Star" project and the "Sustainable Tourism Program" have been introduced in Turkey.

When the literature on determining ecological citizenship levels in Turkey was examined, it was found that in addition to conceptual studies (Bostancı & Yıldırım, 2019; Okudan Dernek & Tırış, 2020), the majority were conducted with teachers (Yurttaş et al., 2021) and prospective teachers (Uysal, 2018; Ünal, 2019; Yılmaz et al., 2019; Koca, 2021; Altın, 2022; Durgun, 2022). In these papers, ecological citizenship levels were examined according to various parameters, such as gender, educational status of parents, membership in non-governmental organizations, participation in social projects, and membership in student clubs. Research also compares the ecological citizenship levels of pre-service teachers from different disciplines (Erdilmen, 2012; Karatekin et al., 2019).

When the literature on tourism and environmental awareness is examined, many studies can be found on ecological awareness (Aksu et al., 2012; Yılmaz et al., 2016), environmental attitudes and behaviors (Aşık, 2018), perceptions and attitudes towards environmentally friendly products (Yıldız & Kılıç, 2016), and ecological footprint awareness (Mercan, 2016; Temizkan & Ceyhanlı, 2020). However, there are no papers on the ecological citizenship levels of tourism students. Whereas, students of tourism who receive environmental education can play an active role in solving environmental problems and demonstrate a sustainable approach by accepting the right to life of all living things. One way to gather information on this issue is to obtain student feedback (Colomer et al., 2013). In this way, the present study aims to determine the ecological citizenship levels of tourism students. The following questions were developed for investigation:

- What are the ecological citizenship levels of tourism students?
- Do students' ecological citizenship levels differ according to gender, university, class, courses taken on the environment and sustainability, membership of non-governmental organizations, level of interest in environmental issues, environmental information sources, frequency of social media sharing about the environment, grade point average, and self-assessment parameters related to ecological citizenship?

According to the students, what factors (education, family, friends, culture, awareness, social media, recycling, etc.) affect levels of ecological citizenship?

The study's results will be important for raising students' awareness, determining the educational needs in this field, and including related courses in the tourism curriculum. They will also contribute to filling the existing gap in the literature.

2. Literature Review

The concept of ecological citizenship emerged to regulate the relationship between nature and human beings in terms of citizenship. It has been discussed globally since the early 1980s (Smith, 1998; Dobson, 2003; Dobson, 2007; Zeng et al., 2016; Karatekin et al., 2019; Goldman et al., 2020; Bourban, 2023; Houmam & Aomar, 2023). Ecological citizenship, also referred to as "green citizenship," "environment-oriented citizenship," "sustainable citizenship," "environmentally friendly citizenship," and "global and proactive citizenship" in the literature (Bell, 2005; Horton, 2006; Latta & Garside, 2005; Ünal, 2019; Güllüpinar, 2020), involves adopting environment-centered attitudes and behaviors in all private and public spaces beyond all national borders (Dobson, 2003). Horton (2006) states that ecological citizens have cross-border rights and responsibilities, drawing attention to the global effects of individual actions (Horton, 2006, as cited in

Karatekin, 2019). Jagers (2009) says that ecological citizens are “eager to make a move” and willing to make individual sacrifices for the sake of the environment. Many authors have embraced ecological citizenship as being key in the reconceptualization of both human-nature and inter-human relations (Jagers, Martinsson & Matti, 2014). In addition, the concept itself, influencing national guidelines and the discourse of non-governmental organizations and the business world, is linked to the vision of environmentally sound development (Houmam & Aomar, 2023).

Ecological citizenship plays a vital role in minimizing the effects of global warming (Wolf et al., 2009). It emphasizes responsibility for the common good and ethics of care towards nature and all living beings (Spannring, 2019). Therefore, it involves a set of ethical and political rights and responsibilities between people and nature, as well as between individuals (Kelly & Abel, 2012). Researchers working on ecological citizenship emphasize the necessity of blurring the lines between the public and private spheres, considering individual habits such as choosing environmentally friendly products and recycling as civic duties (Kennedy, 2011). Ecological citizenship has four dimensions: responsibility, rights and justice, sustainability, and participation (Light, 2006; Karatekin & Uysal, 2018; Feriandi et al., 2022).

Responsibility: Taking responsibility for one's actions or the consequences of any event that falls within one's jurisdiction is called responsibility (TDK, 2023). The primary responsibility of ecological citizenship is to ensure that ecological footprints are sustainable (Dobson, 2003; Seyfang, 2005; Nash & Lewis, 2006). Responsible ecological citizens adopt the protection and sustainability of biodiversity and ecosystems as a fundamental principle (Agyeman & Evans, 2005): Using water resources carefully, favoring environmentally friendly means of transportation, consuming less, giving importance to recycling, and advocating environmental equality (Latta, 2007; Karatekin & Uysal, 2018). As such, ecological citizenship includes many responsibilities (Bookchin, 1996; Dobson, 2003; Uysal, 2018).

Rights and justice: Rights are attributes such as adherence to duty or obedience to lawful authority that constitute the ideal of moral propriety or merit moral approval. Conversely, justice is defined as the quality of being just, impartial, or fair (Merriam-Webster, 2024). An ecological citizen whose most fundamental virtue is justice is someone who believes in and protects the rights of all living things in nature (Dobson, 2003). An individual with a developed sense of justice does not think that environmental problems belong to a specific region or a country but perceives these problems as the problems of all humanity and is concerned about this (MacGregor, 2014). These problems include carbon dioxide emissions, drought, fossil fuel consumption, and genetically modified foods. The ecological citizen adopts rights and justice, observes the truth, and acts in a principled way (Kılıç & Tok, 2014). In addition to the sense of justice that ecological citizens should have, they have also developed several moral characteristics, including love, cleanliness, and responsibility for those in need of defense.

Sustainability: Ecological citizens are defined as people who can find solutions to transnational environmental problems within the framework of sustainability and implement ecological action plans (Skill, 2012). The concept of ecological citizenship is more comprehensive than the traditional understanding of citizenship (Jagers, 2009; Jagers et al., 2014; Asilsoy & Oktay, 2018; Uysal, 2018). In this context, ecological citizenship — adopting a certain idea about nature and the place of humans within it (Zeng et al., 2016) — can be seen as a potential source of motivation for a sustainable life (Seyfang, 2006). Using it as a concept referring to conscious consumption, Seyfang (2006) investigated the sustainable consumption habits of members of a local food community in the UK whose common goal was to consume organic food in the context of ecological citizenship. The results of the study showed that ecological citizenship behaviors reduced ecological footprints and promoted localization and sustainability of consumption of local, organically grown food. These communities help strengthen the concept of ecological citizenship, with environmental impacts that transcend their geographical boundaries. Seyfang describes these consumers as “good ecological citizens” (2006, p. 394) because ecological citizenship is a driving force for sustainable consumption (Dobson, 2003; Seyfang, 2006). Many things can be achieved through the sustainability dimension of ecological citizenship, such as preventing the disappearance of streets, sidewalks, and pedestrian paths from urban life by greening them, reducing the destruction of nature, and ensuring modern continuity (Mead, 2013).

Participation: Participation is the ability of individuals to play an active role in environmental management processes and shape their own lives. In addition to their environmental responsibilities, ecological

citizens actively research the root causes of environmental problems and find solutions (Hadjichambis & Reis, 2020). In other words, the participation dimension of ecological citizenship refers to awareness of the environment as well as active participation in actions to protect it and improve the state of nature (Mengsi & Zhengke, 2018). Based on the necessity of public participation in environmental work to prevent environmental degradation, one focal point of contemporary environmental policy and political theory is the need for comprehensive changes in individual lifestyles (Jager & Matti, 2010). This attitude towards nature reveals a universal form of belonging and an effort to create an environmentally oriented society (Gorz, 1993). In a study conducted with people who participated in various environmental projects, who the authors defined as ecological citizens, Kaplan Mintz et al. (2023) investigated the motivation behind their participation. It was determined that the main impetus for participants' involvement was to protect nature. Ananthraman (2014) examined the ecological citizenship levels of individuals defined as working-class urbanites who were members of a non-governmental organization on environmental protection through sustainable waste management practices. The results of this study, conducted through semi-structured interviews, showed that those from the relatively privileged middle-class volunteer for environment-centered work.

3. Methodology

This study utilizes a quantitative research method. The relational survey model was employed to explain the situation between two or more parameters and determine the degree of these situations (Karasar, 2012). In this section; sample group, questionnaire procedures, data collection tool and analyses were conducted.

3.1 Sample Group

Eskişehir is a university city that is very interested in the sustainability of tourism. Both universities based there, Anadolu University and Eskişehir Osmangazi University, offer tourism programs. In this study, convenience sampling was used. The research data were collected from tourism students enrolled in the 2022-2023 academic year at associate and undergraduate levels at both Eskişehir universities. According to the data obtained from the registration offices of these universities, there were 2267 students enrolled in this academic year (Anadolu University Eskişehir Vocational School/297, Anadolu University Faculty of Tourism/928 and Eskişehir Osmangazi University/1042). Data were collected face-to-face between March and May 2023. Of the 584 questionnaires collected, 572 were found suitable for data analysis. The other 12 questionnaire forms were excluded from the analysis due to reasons such as extra or missing markings.

3.2 Questionnaire Procedures

Questionnaires were used to collect data, which was measured using the "ecological citizenship scale." Necessary permissions were obtained for this. The ethics committee approval required to conduct the survey study was obtained from the Anadolu University Social and Human Sciences Research and Publication Ethics Board under the decision numbered 442221. The protocol number was given on November 22nd, 2022.

Initially, frequency and percentage analyses were conducted for the profile data of the participants. These were analyzed using package programs (SPSS 22 and AMOS 23). Based on the fit indices (Bentler, 1980; Bentler & Bonett, 1980; Browne & Cudeck, 1992; Baumgartner & Homburg, 1996; Lit-ze & Bentler, 1999; Marsh et al., 2006), confirmatory factor analysis (CFA) was conducted to help assess whether the relevant factors had a valid structure. Thus, it was possible to verify the validity of the sub-dimensions. To determine whether participants' ecological citizenship levels differed according to the parameters, t-test, one-way ANOVA, and post-hoc tests, including Tukey's test, the Gabriel test, the Games-Howell test, and Hochberg's GT, were used to analyze the differences (Field, 2013).

Five categories were determined for the ecological citizenship levels of tourism students (Uysal, 2018):

- Between 1 and 1.80..... Almost None (Very Low)
- Between 1.81 and 2.60..... Rarely (Low)

- Between 2.61 and 3.40..... Sometimes (Occasionally)
- Between 3.41 and 4.20..... Usually (High)
- Between 4.21 and 5.00..... Always (Very High)

In addition, an open-ended question was asked to determine factors such as education, family, friends, culture, awareness, social media, and recycling that student thought were effective on their ecological citizenship levels. The answers were analyzed with the help of word cloud analysis using the Word Art program.

3.3 The Data Collection Tool

The “ecological citizenship scale” developed by Karatekin and Uysal (2018) was used to collect data to determine students’ ecological citizenship levels. The scale comprises 24 statements with four dimensions: participation, sustainability, responsibility, and rights and justice. The answers were scored on a five-point Likert scale: 1 - almost never, 2 - rarely, 3 - sometimes, 4 - usually, and 5 - always.

4. Results

4.1 Participant Profile

The findings regarding the profiles of the participants are shown in Table 1.

Table 1. Participant Profiles

Parameters		n	%
Gender	Female	315	55.10
	Male	257	44.90
Faculty/Vocational High School	Anadolu University, Faculty of Tourism	245	42.80
	Eskişehir Osmangazi University, Faculty of Tourism	164	28.70
	Anadolu University, Eskişehir Vocational School	163	28.50
Class	First Year	226	39.50
	Second Year	133	23.30
	Third Year	93	16.30
	Fourth Year	120	21.00
Taking Classes on the Environment	Yes	208	36.40
	No	364	63.60
Sources of Information Regarding Environmental Issues	Online newspapers and magazines	61	10.70
	Social media	463	80.90
	Printed newspapers-magazines	6	1.00
	Non-governmental organizations on the environment	8	1.40
	Conferences and Seminars	14	2.40
	Classes	20	3.50
Level of Interest in Environmental Issues and Matters	None	13	2.30
	Very little	27	4.70
	A little	144	25.20
	Sufficient	354	61.90
	Very much	34	5.90

NGO Membership	Yes	60	10.50
	No	512	89.50
Grade Point Average	0-2.50	132	23.10
	2.51-3.00	261	45.60
	3.01-3.50	140	24.50
	3.51-4.00	39	6.80
Frequency of Social Media Posts on Environmental Issues	Never	165	28.80
	Rarely	194	33.90
	Sometimes	197	34.40
	Very often	16	2.80
Level of Ecological Citizenship (self-scored)	Poor	49	8.60
	Intermediate	424	74.10
	High	99	17.30

Source: Own Elaboration

It was determined that 55.10% of the participants were female, the majority were from Anadolu University Faculty of Tourism (42.80%), and most were first-year students (39.50%). More than half of the students had not taken any course on the environment (63.60%). Students stated that their primary source of information on environmental issues was social media (80.60%) and that they were “sufficiently” interested in environmental issues and problems. When their social media posts on environmental issues were analyzed, it was found that 28.80% of the students did not share anything on social media. In contrast, only 2.80% of the students frequently shared content on environmental issues. Most students (89.50%) were not members of any non-governmental organization focusing on environmental issues. In terms of participants’ grade point averages, it was found that approximately half of them (45.60%) had a grade point average between 2.51 and 3.00. 74.10% of the students perceived themselves as “ecological citizens” at a medium level.

4.2 Confirmatory Factor Analysis

In order to shed light for the fit indices of the scale, confirmatory factor analysis (CFA) was conducted. The validity of the relevant factors was reviewed based on the fit indices obtained. The ratio of the chi-square value to the degrees of freedom is less than 5 ($\chi^2/df=3.93$), indicating that the model is accurate and shows an acceptable fit. RMSEA (0.072), SMRS (0.075), NNFI (0.992) and CFI (0.955) were found to be at acceptable values for perfect fit. Of these fit indices, NFI (0.992), IFI (0.956), RFI (0.966), GFI (0.969), and AGFI (0.940) values are good indicators for the model.

4.3 Ecological Citizenship Levels of Tourism Students

The average of the total scores (ECL) of participants from the ecological citizenship scale (Table 2) shows that, as a group, tourism students have a moderate level of ecological citizenship. However, these levels vary between dimensions. They have a low level of participation, a high level of rights and justice, a low level of responsibility, and a medium level of sustainability.

Table 2. Ecological Citizenship Levels of Tourism Students

	Dimensions of Ecological Citizenship									
	Participation		Justice and Equity		Responsibility		Sustainability		ECL Total	
	$\bar{x}$	s	$\bar{x}$	s	$\bar{x}$	s	$\bar{x}$	s	$\bar{x}$	s
Tourism Students	2.23	0.842	3.65	0.849	3.51	0.936	2.95	0.834	2.92	0.865

Source: Own Elaboration

4.4 Ecological Citizenship Levels of Tourism Students in Terms of Various Parameters

In this section, the results of the analysis on whether the ecological citizenship levels of tourism students differ according to gender, university, class, taking environment/sustainability courses, membership of non-governmental organizations, environmental information sources, level of interest in environmental issues, frequency of social media sharing about the environment, grade point average and self-evaluation of ecological citizenship are given.

The relationship between the ecological citizenship levels of tourism students and gender was examined (Appendix 1), and no difference was found in the participation dimension 0,267 ($p>0,05$). However, the ecological citizenship levels of female students were higher in the rights and justice 0,000 ($p<0,05$), responsibility 0,001 ($p<0,05$), and sustainability dimensions 0,003 ($p<0,05$).

When it was analyzed whether the participants' levels differed according to their university/faculty/school (Appendix 2), there were differences between the dimensions of participation, responsibility, and sustainability. It was determined that the ecological citizenship levels of Eskişehir Osmangazi University Faculty of Tourism students were higher than others in the dimensions of participation ($F=17.68$; $p<0.05$), responsibility ($F=3.13$; $p<0.05$) and sustainability ($F=3.18$; $p<0.05$). No difference was found in the rights and justice dimension ($F=0.082$; $p>0.05$).

Examining the connection between a student's grade and their ecological citizenship level (Appendix 3), differences were found between the groups in the dimensions of participation and sustainability. It was shown that the participation level of fourth-grade students ($F=9.45$; $p<0.05$) was significantly higher than that of first and second-grade students. In the sustainability dimension, it was indicated that the ecological citizenship levels of the fourth-grade students were significantly higher than the first-grade students ($F=4.02$; $p<0.05$). Conversely, no differences were found in the dimensions of rights and justice and responsibility.

When the relationship between taking courses on environmental issues at the university and the level of ecological citizenship was examined (Appendix 4), it was observed that the levels of the students who had taken environmental courses were significantly higher in the dimensions of participation 0,000 ($p<0,05$) and sustainability 0,004 ($p<0,05$) but there was no difference in the responsibility and rights and justice dimensions.

The correlation between information sources of the students on environmental issues and their ecological citizenship levels (Appendix 5) was analyzed, and differences were found between the groups in the participation dimension ($F=4.43$; $p<0.05$). It was discerned that the levels of students whose primary source of information for environmental issues was the internet, newspapers, and magazines were higher than those whose main source was social media. However, no significant difference was found in the dimensions of rights and justice and sustainability.

When it was considered whether there was a link between the level of interest in environmental issues and ecological citizenship levels (Appendix 6), significant differences were found in all dimensions between the groups ($F=15.57$; $p<0.05$, $F=30.63$; $p<0.05$, $F=13.32$; $p<0.05$, $F=14.74$; $p<0.05$, respectively). It was determined that students with more interest in environmental issues also had higher levels of ecological citizenship.

Regarding whether there was a difference between being a member of a non-governmental organization related to the environment and ecological citizenship levels (Appendix 7), it was found that there was a significant difference in the dimensions of participation 0.000 ($p<0.05$) and rights and justice 0.009 ($p<0.05$). Accordingly, it can be concluded that the levels of students who are members of non-govern-

rameters. According to the results of this analysis, the ecological citizenship levels of participants were at a medium level. More specifically, levels were found to be high in the dimensions of rights and justice and responsibility, medium in the dimension of sustainability, and low in the participation dimension. Based on these findings, it can be concluded that tourism students believe in and protect the rights of all living things in nature. However, it is noteworthy that despite these beliefs, their participation in environmental activities is low. Koca (2021) suggested that student teachers in science are the most conscious about rights and justice and responsibility. On the other hand, Altın (2022) found that pre-service preschool teachers scored more highly in the rights and justice dimension and lower in the participation dimension, similar to the present study's findings. Based on these results, through raising awareness about ecological citizenship, students could be encouraged to participate in projects on this subject.

It was found that female students' ecological citizenship levels were higher than those of males in the dimensions of responsibility, sustainability, and rights and justice. Considering studies on the environment, there are some indicating that female students generally have more environmental awareness. For example, Garcia and Luansing (2016) found that females had higher levels than males in their study on graduate students. Panth, Verma, and Gupta (2015) investigated the environmental awareness levels of undergraduate students and found that female students were more sensitive to the environment. It can be said that women are more environmentally aware and responsible, have a more developed sense of justice, and are active participants in environmental protests. This could be explained by the fact that women are more sensitive and have a more developed sense of compassion and responsibility (Brizendine, 2012).

The results showed that Eskişehir Osmangazi University Faculty of Tourism students' ecological citizenship levels were higher than their peers at Anadolu University in participation, responsibility, and sustainability. This suggests that courses such as environmental reading, non-governmental organizations, tourism and environment, tourism and sustainability, and environmental research in tourism are not limited to taught activities but are also adopted outside the classroom by students at Eskişehir Osmangazi University.

Another important result is that the ecological citizenship levels of tourism students differ at the class level. Similar results were found in the literature (Demirer & Şaşmaz Ören, 2020; Koca, 2021; Altın, 2022). It is indicated that as the student's grade level increases and the number of courses and practices related to the environment they have experienced increases, they become more conscious about the environment. The results based on grade point averages only differentiate students' ecological citizenship levels in the dimension of rights and justice. The results of this study support the findings of Kaplowitz and Levine (2005) and Timur and Yılmaz (2011) regarding environmental knowledge levels.

In the participation and sustainability dimensions, the ecological citizenship levels of students who took environmental courses were higher than those who did not. Uzel et al. (2018) and Yılmaz et al. (2019) also found similar results. From this, it can be concluded that university environmental education increases students' environmental awareness, directs them to actively participate in environmental actions, and changes their unsustainable consumption habits.

Significant relationships were found between students' interest in environmental issues and every dimension of the ecological citizenship scale (participation, rights and justice, sustainability, and responsibility). Students with a higher interest in environmental issues also have higher levels of ecological citizenship. Durgun's (2022) findings on parallel increases in the level of knowledge about environmental issues and ecological citizenship level support the results of this study. Except for the participation dimension, no significant differences were found regarding sources of information on environmental issues. In the participation dimension, it was found that students obtained more information about environmental issues from social media. Considering this, as Uysal (2018) stated, schools have become the most effective places for environmental education as they are a source that provides official information on environmental issues. In addition, Kennedy (2011) concluded that the focus of ecological citizenship is to understand the potential for participation. It can be said that students have a high level of awareness of the environment, but they do not exhibit the same enthusiasm in terms of taking action.

When the results of the analysis in the social media sharing parameter were analyzed, it was found that the ecological citizenship levels of students who frequently shared environmental issues were high-

er than the others in the dimensions of rights and justice and sustainability. The levels of students who sometimes shared environmental content were higher in the dimensions of participation and responsibility than those who never shared environmental content. In a conceptual study by Rokka and Moisander (2009), it was argued that online sites play an important role in paving the way for new forms of cultural production, the dissemination of environmental knowledge, and environmental dialogue in which certain forms of ecological citizenship and consumer culture are created and sustained.

The ecological citizenship levels of students who are members of NGOs focusing on environmental issues were higher in the dimensions of participation and rights and justice. Studies in the literature (Koç & Karatekin, 2013; Karatekin et al., 2019; Koca, 2021) support these findings. It can be argued that the cooperation of the state and all stakeholders — such as non-governmental organizations, local governments, and local communities — plays a crucial role in strengthening the concept of ecological citizenship. Another finding obtained by the present study was that students who reported higher levels of ecological citizenship actually had higher levels of ecological citizenship. Jagers et al. (2014) stated that individuals who reflect the attitudes of ecological citizenship have higher sustainable living behaviors.

The participants indicated that family, education, and social media affected their ecological citizenship levels. This result is similar to the findings of Uysal (2018). Therefore, it can be concluded that environmental education starts in the family and is supported by education. In this context, course curricula should be planned with more focus on ecological issues. Awareness could also be raised among families through public service. In addition, ecological issues could be given more space on social media platforms to raise awareness.

This study is limited as it was restricted to students enrolled in tourism programs at Anadolu University and Eskişehir Osmangazi University. Future studies should be planned with a larger and comprehensive sample. Ecological citizenship levels could also be measured using different parameters, such as the new environmental paradigm, environmental literacy, etc., than those addressed here.

REFERENCES

- Agyeman, J., & Evans, B. (2005). Environmental citizenship. In A. Dobson & D. Bell (Eds), *Justice, Governance, and Sustainability: Perspectives on Environmental Citizenship from North America and Europe* (pp. 185-207). The MIT Press.
- Airey, D., Tribe, J., Benckendorff, P., & Xiao, H. (2015). The managerial gaze: The long tail of tourism education and research. *Journal of Travel Research*, 54(2), 139-151.
- Aksu, M., Temeloğlu, E., Özkaya, E., & Gündeğer, M. (2012). Lisans düzeyinde turizm eğitimi alan öğrencilerin turizm ve çevre bilinci üzerine bir araştırma. *Düzce Üniversitesi Sosyal Bilimler Dergisi*, 2(2), 42-61.
- Altın, M. (2022). Okul öncesi öğretmenliği öğrencilerinin çevre eğitimine ilişkin öz-yeterlik ve çevre etiği farkındalık algılarının ekolojik vatandaşlık düzeylerine etkisi [Postgraduate thesis, Çanakkale Onsekiz Mart Üniversitesi].
- Anantharaman, M. (2014). Networked ecological citizenship, the new middle classes and the provisioning of sustainable waste management in Bangalore, India. *Journal of Cleaner Production*, 63, 173-183.
- Asilsoy, B., & Oktay, D. (2018). Exploring environmental behaviour as the major determinant of ecological citizenship. *Sustainable Cities and Society*, 39, 765-771.
- Aşık, N. A. (2018). Ön lisans düzeyinde turizm eğitimi alan öğrencilerin çevreye ilişkin tutum ve davranışları. *Sosyal ve Beşerî Bilimler Dergisi*, 10(2), 99-113.
- Baumgartner, H., & Homburg, C. (1996). Applications of structural equation modelling in marketing and consumer research: a review. *International Journal of Research in Marketing*, 13(2), 139-161.
- Baydemir, T. (2021). Avrupa yeşil mutabakatı, TÜBİTAK Bilim ve Teknik Dergisi. <https://bilimtekNIK.tubitak.gov.tr/makale/avrupa-yesil-mutabakati>.
- Bell, D. (2005). Liberal environmental citizenship. *Environmental Politics*, 14(2), 179-194.
- Bentler, P., & Bonett, D. G. (1980). Significance tests and goodness of fit in the analysis of covariance structures. *Psychological Bulletin*, 88(3), 588-606.
- Bentler, P. (1980). Multivariate analysis with latent variables: causal modeling. *Annual Review of Psychology*, 31, 419-456.
- Bookchin, M. (1996). *Ekolojik bir topluma doğru* (Translated by A. Yılmaz). Ayrıntı Yayınları.
- Bostancı, S. H., & Yıldırım, S. (2019). Sürdürülebilir toplumlar ve ekolojik vatandaşlık üzerine kavramsal bir inceleme. *Iğdır Üniversitesi Sosyal Bilimler Dergisi*, Additional Issue December, 203-218.
- Bourban, M. (2023). Eco-anxiety and the responses of ecological citizenship and mindfulness. In *The Palgrave Handbook of*

- Environmental Politics and Theory* (pp. 65-88). Springer International Publishing.
- Briassoulis, H. (2000). Environmental impacts of tourism: A framework for analysis and evaluation. In H. Briassoulis & Jan van der Straaten (Eds.), *Tourism and the Environment: Regional, Economic, Cultural and Policy Issues* (pp. 21-37). Springer Netherlands.
- Brizendine, L. (2012). *Kadın beyni*. Say Yayınları.
- Browne, M., & Cudeck, R. (1992). Alternative ways of assessing model fit. *Sociological Methods and Research*, 21(2), 230-258.
- Buko, A. (2009). Environmental citizenship for sustainable consumption [Master's thesis, University of Twente].
- Colomer, J., Pallisera, M., Fullana, J., Burriel, M. P., & Fernández, R. (2013). Reflective learning in higher education: A comparative analysis. *Procedia-Social and Behavioral Sciences*, 93, 364-370.
- D'Arco, M., & Marino, V. (2022). Environmental citizen behavior and sustainability app: an empirical investigation. *Transforming Government, People, Process and Policy*, 16(1), 185-202.
- Deale, C. S., & Barber, N. (2012). How important is sustainability education to hospitality programs?. *Journal of Teaching in Travel & Tourism*, 12(2), 165-187.
- Demirer, T., & Şaşmaz Ören, F. (2020). 7. ve 8. sınıf öğrencilerinin çevresel vatandaşlık ve ekolojik ayak izi kavramlarına ilişkin düşünceleri: kelime ilişkilendirme örneği. *Van Yüzüncü Yıl Üniversitesi Eğitim Fakültesi Dergisi*, 17(1), 603-642.
- Dobson, A. (2003). *Citizenship and the Environment*. Oxford University Press.
- Dobson, A. (2007). Environmental citizenship: Towards sustainable development. *Sustainable Development*, 15(5), 276-285.
- Durgun, G. (2022). Sınıf öğretmeni adaylarının çevre etiği yaklaşımları ile ekolojik vatandaşlık düzeyleri arasındaki ilişkinin incelenmesi, [Postgraduate thesis, Fırat Üniversitesi].
- Erdilmen, Ş. (2012). Niğde üniversitesi eğitim fakültesi öğrencilerinin ekolojik vatandaşlık düzeylerinin incelenmesi ve sosyal bilgiler öğretmenliği lisans programı öğrencilerinin durumu ile karşılaştırılması, [Postgraduate thesis, Niğde Üniversitesi].
- Ferriandi, Y. A., Budimansyah, D., & Komalasari, K. (2022). Developing measurement instrument of students' citizenship ecological behavior on citizenship education course in middle school. *Journal of Human Behaviour in the Social Environment*, 32(7), 1-13.
- Field, A. (2013). *Discovering statistics using IBM SPSS statistics*, Sage.
- Garcia, E. C., & Luansing, B. (2016). Environmental awareness among select graduating college students in Region IV-A. LPU-Laguna. *Journal of Multidisciplinary Research*, 5(1), 1-10.
- Goldman, D. et al. (2020). Education for environmental citizenship and responsible environmental behaviour. In Hadjichambis, A.C., et al., *Conceptualizing Environmental Citizenship for 21st Century Education* (Vol. 4, pp. 115-137).
- Gorz, A. (1993). *Kapitalizm, sosyalizm, ekoloji: Yönetim bozuklukları, arayışlar*. Translated by I. Ergüden, İstanbul: Ayrıntı.
- Gössling, S. (2002). Global environmental consequences of tourism. *Global Environmental Change*, 12(4), 283-302.
- Granados-Sanches, J. (2023). Sustainable global citizenship: a critical realist approach. *Social Sciences*, 12(3), 171-193.
- Gül, F. (2013). İnsan-doğa ilişkisi bağlamında çevre sorunları ve felsefe. *Pamukkale Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 14, 17-21.
- Güllüpinar, F. (2020). Ekolojik vatandaşlık. In O. B. Çetin (Ed.), *Çevre sosyolojisi* (p. 154-189). Anadolu Üniversitesi Yayınları.
- Hadjichambis, A. C., & Reis, P. (2020). Introduction to the conceptualisation of environmental citizenship for Twenty-First-century education. In Hadjichambis, A. C., et al., *Conceptualizing Environmental Citizenship for 21st Century Education* (Vol. 4, pp. 1-14). Springer. https://doi.org/10.1007/978-3-030-20249-1_1
- Han, H. (2021). Consumer behavior and environmental sustainability in tourism and hospitality: a review of theories, concepts, and latest research. *Journal of Sustainable Tourism*, 29(7), 1021-1042.
- Houmam, L., & Aomar, I. (2023). Effects of school-based environmental clubs: fostering environmental awareness and strengthening eco-citizen behaviors among students. *Journal of Law and Sustainable Development*, 11(12), Article e1775.
- Jagers, S. C. (2009). In search of the ecological citizen. *Environmental Politics*, 18(1), 18-36.
- Jagers, S. C., Martinsson, J., & Matti, S. (2014). Ecological citizenship: a driver of pro-environmental behaviour? *Environmental Politics*, 23(3), 434-453.
- Kaplan Mintz, K., Arazy, O., & Malkinson, D. (2023). Multiple forms of engagement and motivation in ecological citizen science. *Environmental Education Research*, 29(1), 27-44.
- Kaplowitz, M. D., & Levine, R. (2005). How environmental knowledge measures up at a big ten university. *Environmental Education Research*, 11(2), 143-160.
- Karasar, N. (2012). *Bilimsel araştırma yöntemi*. Nobel Yayıncılık.
- Karatekin, K. (2019). Model review related to the effects of teachers' levels of ecological citizenship. *International Electronic Journal of Environmental Education*, 9(1), 6-61.
- Karatekin, K., & Uysal, C. (2018). Ecological citizenship scale development study. *International Elektronik Journal of Environ-*

- ment Education, 8(2), 2-104.
- Karatekin, K., Salman, M., & Uysal, C. (2019). Öğretmen adaylarının ekolojik vatandaşlık düzeylerinin karşılaştırılması. *Kastamonu Eğitim Dergisi*, 27(4), 1747-1756.
- Kelly, J. R., & Abel, T. D. (2012). Fostering ecological citizenship: the case of environmental service-learning in Costa Rica. *College of the Environment on the Peninsulas Publications*, 2. https://cedar.wvu.edu/hcop_facpubs/2
- Kennedy, E. H. (2011). Rethinking ecological citizenship: the role of neighbourhood networks in cultural change. *Environmental Politics*, 20(6), 843-860.
- Kılıç, S., & Tok, N. (2014). Geleneksel adalet anlayışlarından çevresel adalet anlayışına. *Uluslararası Alanya İşletme Fakültesi Dergisi*, 6(3), 213-228.
- Koca, G. (2021). Fen bilgisi öğretmen adayları ve ekolojik vatandaşlık: faaliyetler ve görüşler. [Postgraduate thesis, Ondokuz Mayıs Üniversitesi].
- Koç, H., & Karatekin, K. (2013). Coğrafya öğretmen adaylarının çevre okuryazarlık düzeylerinin çeşitli değişkenler açısından incelenmesi. *Marmara Coğrafya Dergisi*, 28, 139-174.
- Latta, A., & Garside, N. (2005). Perspectives on ecological citizenship: an introduction. *Environments: A Journal of Interdisciplinary Studies*, 33(3), 1-36.
- Latta, P. A. (2007). Locating democratic politics in ecological citizenship. *Environmental Politics*, 16(3), 377-393.
- Lenzen, M., Sun, Y. Y., Faturay, F., Ting, Y. P., Geschke, A., & Malik, A. (2018). The carbon footprint of global tourism. *Nature Climate Change*, 8(6), 522-528.
- Liasidou, S., Umbelino, J., & Amorim, É. (2019). Revisiting tourism studies curriculum to highlight accessible and inclusive tourism. *Journal of Teaching in Travel & Tourism*, 19(2), 112-125.
- Light, A. (2006). Ecological citizenship: The democratic promise of restoration. *The humane metropolis: People and nature in the 21st-century city*, 169-182.
- Li-tze, H., & Bentler, P. (1999). Cutoff criteria for fit indexes in covariance structure analysis: conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6(1), 1-55.
- MacGregor, S. (2014). Ecological citizenship. In *Handbook of political citizenship and social movements* (pp. 107-132). Edward Elgar Publishing.
- Marsh, H., Hau, K. T., Artelt, C., Baumert, J., & Peschar, J. (2006). OECD's brief self-report measure of educational psychology's most useful affective constructs: cross-cultural, psychometric comparisons across 25 countries. *International Journal of Testing*, 6(4), 311-360.
- McMillan, E. E., Wright, T., & Beazley, K. (2004). Impact of a university-level environmental studies class on students' values. *The Journal of Environmental Education*, 35(3), 19-27.
- Mead, E. (2013). *Promoting lasting ecological citizenship among college students*. Lehigh University.
- Melo-Escrihuela, C. (2015). Should ecological citizenship advocates praise the green state?. *Environmental Values*, 24(3), 321-344.
- Mengsi, Y., & Zhengke, F. (2018). *Construction of environmental citizenship in hypermedia space*. In *2018 International Conference on Educational Research, Economics, Management and Social Sciences* (pp. 1407-1411). Francis Academic Press.
- Mercan, Ş. O. (2016). Lisans düzeyinde turizm eğitimi alan öğrencilerin otel işletmelerini çevre duyarlılığı açısından değerlendirmeleri. *Karabük Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 6(1), 126-144.
- Nash, N., & Lewis, A. (2006). Overcoming obstacles to ecological citizenship: the dominant social paradigm and local environmentalism. In Dobson A. & Bell, D. (Eds.), *Environmental Citizenship* (pp. 153-184). MIT Press.
- Okudan Dernek, K., & Tırış, G. (2020). Yurttaşlığı yeniden düşünmek: ekolojik yurttaşlık üzerine bir değerlendirme. *Ekonomi Politika ve Finans Araştırmaları Dergisi*, 5(3), 745-772.
- Panth, M. K., Verma, P., & Gupta, M. (2015). The role of attitude in environmental awareness of under graduate students. *International Journal of Research In Humanities And Social Studies*, 2(7), 55-62.
- Rokka, J., & Moisander, J. (2009). Environmental dialogue in online communities: negotiating ecological citizenship among global travellers. *International Journal of Consumer Studies*, 33, 199-205.
- Santos, J. A. R. (1999). Cronbach's alpha: a tool for assessing the reliability of scales. *Journal of Extension*, 37, 1-5.
- Seyfang, G. (2005). Shopping for sustainability: can sustainable consumption promote ecological citizenship?. *Environmental Politics*, 14(2), 290-306.
- Seyfang, G. (2006). Ecological citizenship and sustainable consumption: Examining local organic food networks. *Journal of Rural Studies*, 22(4), 383-395.
- Skill, K. (2012). The what, who, and how of ecological action space. *Sustainability*, 4(1), 1-16.
- Smith, M. J. (1998). *Ecologism: Towards ecological citizenship*. University of Minnesota Press.
- Spannring, R. (2019). Ecological citizenship education and the consumption of animal subjectivity. *Education sciences*, 9(1),

41.

- Steg, L., & Vlek, C. (2009). Encouraging pro-environmental behaviour: An integrative review and research agenda. *Journal of Environmental Psychology*, 29(3), 309-317.
- Tandoğan, D., & Genç, M. (2019). Türkiye’de turizm ve karbondioksit salımı arasındaki ilişki: rals-enge ve granger eşbütünleşme yaklaşımı. *Anatolia: Turizm Araştırmaları Dergisi*, 30(3), 221-230.
- Tarrant, M., & Lyons, K. (2012). The effect of short-term educational travel programs on environmental citizenship. *Environmental Education Research*, 18(3), 403-416.
- TDK (2023). *Türk dil kurumu sözlükleri*. <https://sozluk.gov.tr/>
- Temizkan, R., & Ceyhanlı, K. (2020). Turizm lisans öğrencilerinin ekolojik ayak izi farkındalıkları. *Turizm Akademik*, 7(2), 203-223.
- Timur, S., & Yılmaz, M. (2011). Fen bilgisi öğretmen adaylarının çevre bilgi düzeylerinin belirlenmesi ve bazı değişkenlere göre incelenmesi. *Gazi Üniversitesi Gazi Eğitim Fakültesi Dergisi*, 31(1), 303-320.
- Travaline, K., & Hunold, C. (2010). Urban agriculture and ecological citizenship in Philadelphia. *Local Environment*, 15(6), 581-590.
- Uysal, C. (2018). Sınıf öğretmeni adaylarının ekolojik vatandaşlık düzeylerinin belirlenmesi [Postgraduate thesis, Kastamonu Üniversitesi].
- Uzel, N., Adıgüzel, M., Yılmaz, M., & Gül, A. (2019). The effect of different variables on pre-service teachers’ perceptions of self-efficacy on environmental education. *Erzincan University Journal of Education Faculty*, 21(3), 93-107.
- Ünal, E. (2019). The investigation of ecological citizenship levels of teacher candidates. *Asian Journal of Education and Training*, 5(2), 329-334.
- Valencia Sáiz, Á. (2005). Globalization, cosmopolitanism and ecological citizenship. *Environmental Politics*, 14, 163-178.
- Vlek, C., & Steg, L. (2007). Human behavior and environmental sustainability: Problems, driving forces and research topics. *Journal of Social Issues*, 63(1), 1-19.
- Wolf, J., Brown, K., & Conway, D. (2009). Ecological citizenship and climate change: perceptions and practice. *Environmental Politics*, 18(4), 503-521.
- Yıldız, S. B., & Kılıç, S. N. (2016). The attitudes and behaviours of undergraduate tourism students towards the environmentally friendly products. *International Journal of Human Sciences*, 13(1), 1304-1325.
- Yılmaz, İ., Çullu Kaygısız, N., & Özgül Katlav, E. (2016). Turizm öğrencilerinin çevre duyarlılıkları üzerine bir araştırma. *TURAN-SAM Uluslararası Bilimsel Hakemli Dergisi*, 8(32), 116-122.
- Yılmaz, M., Karakaya, F., Çimen, O., & Adıgüzel, M. (2019). Fen bilgisi öğretmen adaylarının ekolojik vatandaşlık düzeylerinin incelenmesi. *Akdeniz Eğitim Araştırmaları Dergisi*, 13(30), 98-113.
- Yurttaş, A., Erdaş Kartal, E., Çağlar, A., & Yurttaş, A. (2021). Temel eğitimde görev yapan öğretmenlerin ekolojik vatandaşlık düzeylerinin incelenmesi. *International Social Sciences Studies Journal*, 7(85), 2905-2916.
- Zeng, C., Sweet, W., & Cheng, Q. (2016). Ecological citizenship and Green burial in China. *Journal of Agricultural and Environmental Ethics*, 29, 985-1001.

ORCID

Dönüş Çiçek  <https://orcid.org/0000-0003-3690-4442>

Seher Gülenç  <https://orcid.org/0000-0001-5104-583X>

Erdem Korkmaz  <https://orcid.org/0000-0001-7056-1805>

Notes on contributors

Dönüş Çiçek earned her bachelor’s degree at Anadolu University School of Tourism and Hotel Management (1997) and master’s degree at Anadolu University Tourism and Hotel Management department (2000). She had started working as a lecturer at Balıkesir University Erdek Vocational School (1998). Subsequently she has started to teach at Anadolu University Eskişehir Vocational School (2004). She got her PhD degree from Eskişehir Osmangazi University at Tourism Administration department (2017). She is still working as associate professor at Eskişehir Vocational

School.

Seher Gülenç received the bachelor's degree with highest honor in tourism guidance from Balıkesir University, Balıkesir, Turkey, in 2009, and the master's and PhD degrees in tourism management from Balıkesir University in 2011 and from Anadolu University, Eskişehir, Türkiye, in 2019, respectively. She currently works at Anadolu University, Faculty of Business Administration, Department of Tourism Management as assistant professor. Her current research interests include health tourism, medical tourism, sustainable tourism and tourism management.

Erdem Korkmaz received the bachelor's degree from Tourism and Hotel Management department in 2002 and master's degree in 2005 from Anadolu University, Eskişehir, Turkey. He got his PhD degree from Anadolu University Tourism Management department. He is working as assistant professor at Anadolu University Eskişehir Vocational School.

APPENDIX

Appendix 1. Gender-Based t-test Results of Ecological Citizenship Levels of Tourism Students

<i>Ecological Citizenship</i>	<i>Gender</i>	<i>n</i>	$\bar{x}$	<i>sd</i>	<i>df</i>	<i>t</i>	<i>p</i>
Participation	Female	315	2.26	0.83	570	0.098	0.267
	Male	257	2.18	0.84			
Justice and Equity	Female	315	3.80	0.80	525	9.267	0.000
	Male	257	3.48	0.87			
Responsibility	Female	315	3.63	0.90	570	1.255	0.001
	Male	257	3.36	0.96			
Sustainability	Female	315	3.04	0.77	512	3.541	0.003
	Male	257	2.83	0.55			

Source: Own Elaboration

Appendix 2. One-Way Analysis of Variance Results Regarding the Ecological Citizenship Levels of the Students Based on their Universities

<i>Ecological Citizenship</i>	<i>University</i>	<i>n</i>	$\bar{x}$	<i>F</i>	<i>p</i>	<i>Games-Howell / Tukey</i>
Participation	Anadolu University, Faculty of Tourism	245	2.13	17.68	0.000	1-3 2-3
	Anadolu University, Eskişehir Vocational School	163	2.05			
	Eskişehir Osmangazi University, Faculty of Tourism	164	2.54			
Justice and Equity	Anadolu University, Faculty of Tourism	245	3.67	0.082	0.921	-
	Anadolu University, Eskişehir Vocational School	163	3.65			
	Eskişehir Osmangazi University, Faculty of Tourism	164	3.64			
Responsibility	Anadolu University, Faculty of Tourism	245	3.40	3.13	0.044	1-3 2-3
	Anadolu University, Eskişehir Vocational School	163	3.58			
	Eskişehir Osmangazi University, Faculty of Tourism	164	3.61			
Sustainability	Anadolu University, Faculty of Tourism	245	2.89	3.18	0.042	1-3 2-3
	Anadolu University, Eskişehir Vocational School	163	2.90			
	Eskişehir Osmangazi University, Faculty of Tourism	164	3.09			

Source: Own Elaboration

Appendix 3. Variance Analysis Results on Ecological Citizenship Levels of the Students Based on their Classes

<i>Ecological Citizenship</i>	<i>Class</i>	<i>n</i>	$\bar{x}$	<i>F</i>	<i>p</i>	<i>Games Howell/ Hochberg GT</i>
Participation	First Year	226	2.08	9.45	0.000	1-4 2-4
	Second Year	133	2.12			
	Third Year	93	2.33			
	Fourth Year	120	2.54			
Justice and Equity	First Year	226	3.55	2.03	0.108	-
	Second Year	133	3.68			
	Third Year	93	3.74			
	Fourth Year	120	3.75			
Responsibility	First Year	226	3.40	2.17	0.090	1-4 2-4
	Second Year	133	3.53			
	Third Year	93	3.54			
	Fourth Year	120	3.66			
Sustainability	First Year	226	2.82	4.02	0.007	1-4 2-4
	Second Year	133	2.95			
	Third Year	93	3.02			
	Fourth Year	120	3.13			

Source: Own Elaboration

Appendix 4. T-Test Results on the Relationship between Taking Environment Classes and Ecological Citizenship Levels of the Students

<i>Ecological Citizenship</i>	<i>Taking Environment Classes</i>	<i>n</i>	$\bar{x}$	<i>sd</i>	<i>df</i>	<i>t</i>	<i>p</i>
Participation	Yes	208	2.46	0.88	570	2.27	0.000
	No	364	2.09	0.78			
Justice and Equity	Yes	208	3.70	0.96	570	2.31	0.338
	No	364	3.63	0.77			
Responsibility	Yes	208	3.60	0.92	570	0.730	0.080
	No	364	3.46	0.93			
Sustainability	Yes	208	3.08	0.82	570	0.190	0.004
	No	364	2.87	0.82			

Source: Own Elaboration

Appendix 5. Tourism Students' Sources of Information about Environmental Issues

<i>Ecological Citizenship</i>	<i>Getting Information about Environmental Issues</i>	<i>n</i>	$\bar{x}$	<i>F</i>	<i>p</i>	<i>Hochberg GT</i>
Participation	Online newspapers and magazines	61	2.53	4.43	0.001	1-2
	Social media	463	2.15			
	Printed newspapers-magazines	6	2.62			
	Non-governmental organizations on the environment	8	2.52			
	Conferences and Seminars	14	2.57			
	Classes	20	2.66			
Justice and Equity	Online newspapers and magazines	61	3.88	1.30	0.261	-
	Social media	463	3.62			
	Printed newspapers-magazines	6	3.61			
	Non-governmental organizations on the environment	8	3.62			
	Conferences and Seminars	14	3.91			
	Classes	20	3.55			
Responsibility	Online newspapers and magazines	61	3.55	0.991	0.422	-
	Social media	463	3.49			
	Printed newspapers-magazines	6	3.27			
	Non-governmental organizations on the environment	8	3.08			
	Conferences and Seminars	14	3.78			
	Classes	20	3.76			
Sustainability	Online newspapers and magazines	61	3.19	2.07	0.067	-
	Social media	463	2.90			
	Printed newspapers-magazines	6	2.94			
	Non-governmental organizations on the environment	8	2.97			
	Conferences and Seminars	14	3.21			
	Classes	20	3.21			

Source: Own Elaboration

Appendix 6. Tourism Students' Interest in Environmental Issues

<i>Ecological Citizenship</i>	<i>Interest in Environmental Issues</i>	<i>n</i>	$\bar{x}$	<i>F</i>	<i>p</i>	<i>Games-Howell/Hochberg GT</i>
Participation	None	13	1.75	15.57	0.000	1-5
	Very Little	27	1.69			2-4
	A Little	144	2.00			2-5
	Sufficient	354	2.30			3-4
	Very Much	34	2.99			3-5
						4-5
Justice and Equity	None	13	2.61	30.63	0.000	1-5
	Very Little	27	2.76			2-4
	A Little	144	3.34			2-5
	Sufficient	354	3.83			3-4
	Very Much	34	4.27			3-5
						4-5

Responsibility	None	13	2.76	13.32	0.000	1-5
	Very Little	27	2.72			2-4
	A Little	144	3.29			2-5
	Sufficient	354	3.64			3-4
	Very Much	34	3.93			3-5
Sustainability	None	13	2.25	14.74	0.000	1-4
	Very Little	27	2.51			1-5
	A Little	144	2.69			2-4
	Sufficient	354	3.05			2-5
	Very Much	34	3.57			3-4

Source: Own Elaboration

Appendix 7. NGO Membership Status of Tourism Students

<i>Ecological Citizenship</i>	<i>NGO</i>	<i>n</i>	$\bar{x}$	<i>sd</i>	<i>df</i>	<i>t</i>	<i>p</i>
Participation	Yes	60	2.60	1.13	65.95	21.051	0.000
	No	512	2.18	0.79			
Justice and Equity	Yes	60	3.93	0.88	570	0.023	0.009
	No	512	3.62	0.84			
Responsibility	Yes	60	3.58	1.13	68.19	4.61	0.609
	No	512	3.50	0.91			
Sustainability	Yes	60	3.15	0.99	68.56	7.62	0.093
	No	512	2.92	0.81			

Source: Own Elaboration

Appendix 8. Variance Analysis Results of the Ecological Citizenship Levels of the Students and Frequency of Posting Environmental Content on Social Media

<i>Ecological Citizenship</i>	<i>Social Media Posts</i>	<i>n</i>	$\bar{x}$	<i>F</i>	<i>p</i>	<i>Gabriel/Games-Howell</i>
Participation	Never	165	1.85	25.50	0.000	1-2
	Rarely	194	2.18			1-3
	Sometimes	197	2.57			1-4
	Frequently	16	2.45			2-3
Justice and Equity	Never	165	3.27	21.03	0.000	1-2
	Rarely	194	3.67			1-3
	Sometimes	197	3.92			1-4
	Frequently	16	4.08			2-3
Responsibility	Never	165	3.08	19.80	0.000	3-4
	Rarely	194	3.57			1-2
	Sometimes	197	3.80			1-3
	Frequently	16	3.60			2-3
Sustainability	Never	165	2.67	13.52	0.000	1-2
	Rarely	194	2.90			1-3
	Sometimes	197	3.19			1-4
	Frequently	16	3.34			2-3

Source: Own Elaboration

Appendix 9. Variance Analysis Results of the Students' Ecological Citizenship Levels and Grade Point Averages

<i>Ecological Citizenship</i>	<i>Grade Point Average</i>	<i>n</i>	$\bar{x}$	<i>F</i>	<i>p</i>	<i>Gabriel</i>
Participation	0-2.50	132	2.30	0.848	0.468	-
	2.51-3.00	261	2.23			
	3.01-3.50	140	2.14			
	3.51-4.00	39	2.28			
Justice and Equity	0-2.50	132	2.49	3.185	0.024	1-2 3-1
	2.51-3.00	261	3.66			
	3.01-3.50	140	3.80			
	3.51-4.00	39	3.64			
Responsibility	0-2.50	132	3.52	0.356	0.785	-
	2.51-3.00	261	3.50			
	3.01-3.50	140	3.47			
	3.51-4.00	39	3.64			
Sustainability	0-2.50	132	2.89	0.465	0.704	-
	2.51-3.00	261	2.94			
	3.01-3.50	140	2.98			
	3.51-4.00	39	3.05			

Source: Own Elaboration

Appendix 10. Variance Analysis Results for Ecological Citizenship Level Perceptions of Tourism Students

<i>Ecological Citizenship</i>	<i>Ecological Citizenship Perception</i>	<i>n</i>	$\bar{x}$	<i>F</i>	<i>p</i>	<i>Hochberg GT/Games-Howell</i>
Participation	Poor	49	1.85	17.65	0.000	1-3
	Intermediate	424	2.18			2-1
	High	99	2.62			2-3
Justice and Equity	Poor	49	3.00	21.71	0.000	1-2
	Intermediate	424	3.66			1-3
	High	99	3.94			2-3
Responsibility	Poor	49	2.96	11.38	0.000	1-2
	Intermediate	424	3.52			1-3
	High	99	3.72			
Sustainability	Poor	49	2.56	10.96	0.000	1-2
	Intermediate	424	2.93			1-3
	High	99	3.22			2-3

Source: Own Elaboration

Strengthening Cross-Border Ties: A Participatory Vision for EuroGuadiana Tourism

Thomas Panagopoulos  ¹

Pooyan Sedarati  ²

Joaquim Pinto Contreiras  ³

1. Research Center for Tourism, Sustainability and Well-being (CinTurs), University of Algarve, Faro, Portugal

2. University of Algarve, Faro, Portugal

3. Research Center for Tourism, Sustainability and Well-being (CinTurs), University of Algarve, Faro, Portugal

ABSTRACT

This article delves into the intricacies of Eurocity of Guadiana (EuroGuadiana) cross-border initiative that seeks to bolster economic value through innovative tourism products. It delineates a comprehensive plan aimed at turning EuroGuadiana into a center of cultural and economic vibrancy within Andalusia/Algarve, thus overturning its current peripheral status, using a rich body of literature on regional development and tourism strategies. The key to this strategy is a meticulous tourism diagnosis, facilitated by a value chain tool that identifies existing resources and their potential for complementarity and cooperation, aligning strategic decisions with the factors that increase potential tourists' perceptions. Participatory methods and transborder community development are key components of the strategy. The former encourages inclusivity and collaboration, integrating diverse stakeholder insights into the decision-making process, thereby fostering a strategy that is both grounded and adaptive to the evolving preferences of tourists. The latter leverages the region's unique cross-border position to build cultural cohesion and economic synergy, promoting collaborative efforts in conservation and sustainable practices. Envisioned as a beacon of sustainable and inclusive development, EuroGuadiana aspires to emerge as a destination characterized by diversity, prosperity, and vibrancy. Furthermore, it aims to establish a collaborative platform that bridges cities within the region, fostering a network that is conducive to shared growth and innovation. With this multi-faceted approach, EuroGuadiana is being repositioned as a dynamic and harmonious hub of regional development.

KEYWORDS

Stakeholder Approach, Qualitative Study, Tourism Strategy, Cross-Border.

ARTICLE HISTORY

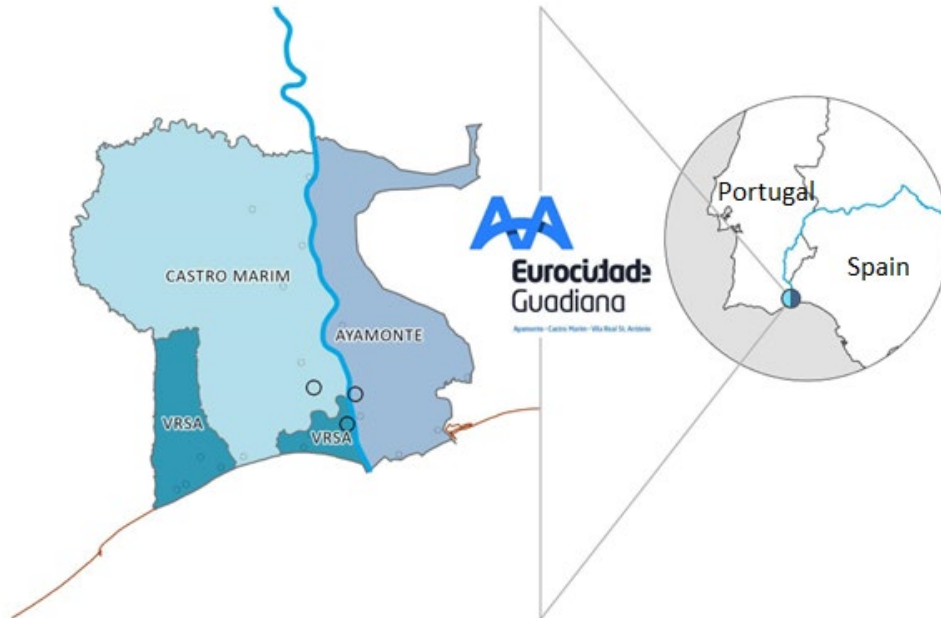
Received 03 May 2024 Accepted 16 September 2024

1. Introduction

Eurocities play a crucial role in the cohesion of the Cross-Border European territories. With the advent of the modern era, the burgeoning concept of Eurocities stands as a beacon of innovation, fostering cross-border cooperation strategies, catalyzing regional development (Castanho et al., 2017), development of infrastructures and planning regarding new border interactions. This notion finds a vivid embodiment in the ambitious Guadiana Eurocity project, a venture that promises to transform the border regions of Spain and Portugal into a nexus of cultural exchange, sustainable development, and economic synergy. Nestled along the tranquil banks of the Guadiana River, the cities of Ayamonte in Spain, and Vila Real de Santo Antonio and Castro Marim in Portugal (Figure 1), despite being in two different nations, share not only geographical proximity but also a vision of interconnected prosperity and growth (Ayamonte City Council, 2017).

The Eurocity of Guadiana aims to build a single model of an innovative and cooperative cross-border city, which provides its citizens with common efficient services by means of joint territorial planning and a common strategy in tourism. Envisioned as a tri-city Euro area, this initiative seeks to metamorphose the region from a peripheral entity to a vibrant focal point in the Andalusia/Algarve region, capitalizing on the unique geographical position straddling the Spain-Portugal border. The porous borders of this envisioned Eurocity serve as a canvas where a rich tapestry of cultural exchanges, tourism initiatives, and trade collaborations can be woven, creating a region that is greater than the sum of its parts. Schools from each city could foster a spirit of unity and learning through exchange programs, immersing students in the rich history, language, and lifestyles of the neighboring country.

Figure 1. The territorial context of the Eurocity of Guadiana includes the municipalities of Ayamonte in Spain, and Vila Real de Santo Antonio and Castro Marim in Portugal



Source: Own Elaboration

At the heart of this initiative lies a strategic tourism plan, grounded in a meticulous analysis of the region's resources, complementarities, and potential for cooperative development (Valls & Neves, 2014; Tourism of Portugal, 2017). This blueprint envisages a vibrant hub where tourists can seamlessly traverse the three cities, experiencing a rich amalgamation of local music, art, and cuisine through joint tourism initiatives. A potential tri-city free trade zone could further bolster the local economies, encouraging businesses to adopt a regional rather than a local outlook, with the definition of clear common objectives and master plans (Castanho et al., 2018).

Moreover, the cities are united in their commitment to sustainable development, with a focus on protecting the shared environment, including the pristine Guadiana River. Joint initiatives could spearhead efforts in clean energy adoption, waste reduction, and preservation of local biodiversity, fostering a powerful regional approach to environmental protection. The development of efficient and environmentally friendly transportation networks, potentially encompassing improved ferry services or the construction of pedestrian, bicycle, and electric vehicle-friendly bridges or tunnels, stands as a testament to their commitment to sustainability. Green-blue infrastructure projects have been implemented as an alternative visitor attraction with a growing recognition of the importance of preserving nature, cultural heritage, and promoting sustainable tourism practices (Terkenli et al., 2017; Terkenli et al., 2020; Lukoseviciute & Panagopoulos, 2021).

Furthermore, the cities plan to cultivate a fertile ground for education and research, fostering collaborative programs between universities and research institutions in the region. These programs would delve into areas of mutual interest such as urban planning with respect to environmental quality and human well-being, cultural studies, and regional history, fostering a knowledge-sharing ecosystem that transcends borders (Panagopoulos et al., 2016). Overall, the Guadiana Eurocity concept represents a beacon of hope and a model for future cross-border collaborations, promising to transform Ayamonte, Vila Real de Santo Antonio, and Castro Marim into a vibrant, sustainable, and interconnected region that harmoniously blends tradition with innovation, and nature with development.

This article aims to analyze the participatory approach implemented in the EuroGuadiana region as a foundation for developing a broader participatory vision for tourism. By involving diverse stakeholders, the study provides an in-depth examination of how this approach can drive sustainable economic growth and foster cross-border collaboration in tourism development.

2. Methodology

In the promising landscape of the EuroGuadiana region, a meticulous and strategic approach to tourism development is imperative. The formulation of a robust development strategy is predicated upon a comprehensive tourism diagnosis that scrutinizes the existing resources and their potential for complementarity and cooperation. This process is guided by the value chain tool, a critical instrument that facilitates the alignment of strategic decisions with the factors pivotal in enhancing the value perceived by potential tourists (Pulido-Fernández & López-Sánchez, 2016).

To navigate the complexities of this endeavor, the adoption of specific methodologies is essential. Firstly, the participatory approach stands as a cornerstone, fostering inclusivity and collaboration at various stages of strategy development. This approach ensures that decision-making is inclusive, incorporating insights and perspectives from a diverse group of stakeholders, thereby reflecting the real needs and aspirations of the region (Valls & Neves, 2014). Moreover, it fosters a sense of ownership among stakeholders, encouraging active participation in the implementation of the strategy, which is likely to be more aligned with the ground realities and expectations of the local stakeholders (Associação de Defesa do Património de Mértola, 2012). Furthermore, it facilitates a feedback-driven improvement process, allowing the strategy to continually evolve and adapt to the changing preferences and expectations of tourists, thereby enhancing the overall value proposition of the EuroGuadiana as a tourist destination (Padinha et al., 2015).

Secondly, the fostering of transborder communities emerges as a vital methodology, particularly given the EuroGuadiana region's unique position as a cross-border territory (Castanho et al., 2017). This approach can be a key player in building cultural cohesion and collaboration, creating tourism products that celebrate the shared heritage and cultural ties that span across the borders of Spain and Portugal (Junta de Andalucía, 2020). Moreover, it can foster economic synergy, attracting a larger pool of tourists and boosting the economic prospects of the entire region through the development of joint tourism products and initiatives (Palomo Marín et al., 2019). Additionally, it encourages a sense of shared responsibility towards the sustainable development of the region, promoting collaborative efforts for the conservation of natural spaces and the promotion of sustainable practices (Pulido-Fernández & López-Sánchez, 2016).

The integration of the participatory approach and the fostering of transborder communities are methodologies that resonate deeply with the overarching goals of the EuroGuadiana development strategy.

These methodologies, guided by the value chain tool, can potentially facilitate the alignment of strategic decisions with the critical factors that enhance the value perceived by potential tourists, fostering a tourism sector that is not only vibrant and attractive but also sustainable and inclusive.

2.1 Participatory Approach Implemented in EuroGuadiana

Transborder communities refer to communities that exist across borders, sharing cultural, historical, and sometimes linguistic ties (Lynn, 2012). In the context of the EuroGuadiana region, a participatory approach to tourism development can be a pivotal strategy. This approach involves engaging various stakeholders including local communities, tourists, and government bodies in the planning and decision-making processes (Villanueva et al., 2022). It is grounded in the belief that involving a diverse group of stakeholders can lead to more inclusive, sustainable, and successful outcomes (Loures et al., 2016).

Community Engagement Workshops: Organizing workshops where local communities can voice their opinions and suggestions regarding tourism development. This could help in crafting policies that are more aligned with the local needs and aspirations.

Collaborative Decision Making: Establishing platforms where decisions regarding tourism development are made collaboratively, with inputs from government bodies, industry stakeholders, and local communities. This could foster a sense of ownership and mutual respect among different groups.

Feedback and Iteration: Implementing mechanisms to collect feedback from tourists and using this data to make iterative improvements to the tourism offerings in the region.

Focus Groups: Forming focus groups consisting of representatives from various communities to brainstorm and develop strategies that cater to different facets of tourism, including cultural preservation, environmental sustainability, and economic development. These focus group discussions are guided by participatory learning and action principles, which include the right to participate, seeking unheard voices, and reversing learning. These principles establish an equitable and inclusive environment where stakeholders actively contribute to the strategy's formation. Notably, the practice of "handing over the stick" ensures that marginalized voices are heard, fostering an inclusive approach to decision-making. The well-structured agenda of the focus groups, comprising opening sessions, focused group actions, and idea development, facilitates productive discussions and meaningful outcomes. The use of post-it notes allows participants to systematically express their concerns, ideas, and proposed actions, emphasizing a comprehensive and inclusive approach to information gathering. The project, brought together a number of participants from Spain and Portugal, successfully managed a diverse group of 59 participants across various sectors such as municipal divisions, sports, tourism, cultural, and environmental entities. Organized into expert-moderated focus groups, these participants from Ayamonte, Vila Real de Santo António and Castro Marim contributed to each thematic segment, from Sports and Tourism to Heritage and Cultural Tourism, and from Natural Spaces and Nature Tourism to the Management of the "Eurocidade do Guadiana."

Cultural Exchange Programs: Initiating cultural exchange programs that promote the sharing of traditions, languages, and histories between communities on either side of the border. This could promote a deeper understanding and appreciation of the shared heritage.

Joint Tourism Products: Developing tourism products that encompass attractions from both sides of the border, offering tourists a richer and more diverse experience. This could also promote economic development across the region.

Collaborative Conservation Efforts: Working together to conserve the natural and cultural heritage of the region, leveraging the strengths and resources of communities from both sides of the border.

Transborder Community Forums: Establishing forums where community members from both sides can come together to discuss common issues and collaborate on initiatives that benefit the wider region.

Research and Documentation: Conducting research to document the shared history and cultural ties of the transborder communities, which can be used to develop educational materials and tourism products that highlight the rich, shared heritage of the region.

By implementing these methodologies, the EuroGuadiana region fostered a more inclusive, collaborative, and sustainable approach to tourism development, leveraging the strengths of its diverse communities and rich cultural heritage.

3. Results

3.1 Value Proposition and Destination Identity

Central to the strategy is the articulation of a value proposition that distinguishes the Guadiana Eurocity as a unique tourist destination. This proposition hinges on the innovative satisfaction of tourist needs, fostering a distinctive positioning in the market. The Guadiana River stands as a symbolic identity of the destination, establishing the border between the Spanish and Portuguese territories and forming the core of the destination's image and tourist brand, "The Liquid Border". This branding accentuates the cross-border character of the Eurocity, offering a differentiated and enriching tourist experience (Figuerola et al., 2018).

Furthermore, the strategy emphasizes the development of a sustainable tourism model that ensures the responsible utilization of the region's resources. This involves a high degree of coordination between various public entities and the private sector, fostering a safe and quality-oriented tourist destination. Also highlighted in the initiative is the importance of technological innovation and relationship marketing in enhancing the tourist experience and encouraging loyalty (Padinha et al., 2015). In the current scholarly discourse surrounding the concepts of center and periphery within social science theory, there exists an opportunity to further refine these terms, incorporating insights from historians while excluding perspectives from geographers for nuanced reasons (Smith, 2015). The theories propounded by scholars such as Johan Galtung, Stein Rokkan, Andre Gunder Frank, and Jon Naustdalslid serve as instrumental tools in analyzing societal relations, albeit through varied lenses and objectives (Frank, 2002). A common thread in these theories is the assertion that understanding the relationship between the center and its periphery is vital for deciphering the dynamics of society or specific sectors within it (Rokkan, 1999). These theories, however, face the daunting task of marrying 'sociological imagination' with 'spatial consciousness', a concept brought to the fore by David Harvey (Harvey, 1973). Furthermore, these theories emphasize the necessity to address both spatial locations and historical events to craft a 'general' theory, with a significant focus on the concept of power, often linked with 'exploitation', and the geographical locus of social change that gives rise to the centre and its periphery (Naustdalslid, 2001).

The critique presented in the article primarily zeroes in on the first of the four identified points: the juxtaposition of spatial consciousness with sociological imagination and its repercussions on historical awareness, the concept of power and/or exploitation, and the theory of social change. This critique highlights the persistent challenge of integrating socio-economic and geographic space into a single theory or model, which is especially pressing for economists working at the regional level (Galtung, 1971). As a result of the lack of toll barriers and national boundaries aligning with specific points in space, this issue has necessitated the introduction of techniques such as 'partial equilibrium' in order to address the monopoly granted by land ownership. Moreover, the article emphasizes the challenges that social scientists in other disciplines face when attempting to define rural and urban geographical terms sociologically. As Harvey notes, there are groups with strong sociological imaginations but a lack of spatial awareness, and vice versa, suggesting there is a significant gap in interdisciplinary approaches to these issues.

In this context, the integration of the tourism sector into this discourse emerges as a promising avenue for exploration, offering a fresh perspective and fostering a deeper understanding of the center and periphery concepts in social science theory. Furthermore, connecting this discourse to the principles of sustainable development underscores the importance of adopting a participatory approach in the development of such concepts (United Nations, 2015). Galtung's theory, a significant part of the critique, delineates the center/periphery relationship as a structural relationship between collectivities, where imperialism is viewed as a form of dominance. This gap necessitates a more comprehensive approach that successfully marries spatial consciousness with sociological imagination.

In light of sustainable development, it becomes imperative to foster a participatory approach that encourages diverse stakeholder engagement in the development of these concepts. Such an approach not only facilitates a more robust understanding of the center and periphery concepts but also aligns with the goals of sustainable development, promoting inclusivity, equity, and long-term viability (World Commission on Environment and Development, 1987). By fostering collaborative dialogues and integrating

diverse perspectives, it is possible to craft theories that are more reflective of the complex interplay between spatial and socio-economic factors, thereby contributing to a more sustainable and inclusive future (Vieira & Panagopoulos, 2024).

3.2 Strategic Axes and Product Diversification

The strategic plan delineates three categories of tourism products: central, complementary, and peripheral. The central product continues to be the sun and beach tourism, with a renewed focus on offering experiences beyond the conventional attractions. This includes leveraging the potential of the Guadiana River as a central axis of the tourist offer, complemented by a range of activities such as hiking, mountain biking, and river cruises that capitalize on the natural environment and cross-border ethnological richness of the Eurocity (Palomo Marín et al., 2019).

Peripheral products encompass various forms of cultural tourism, including defensive architecture, historical-artistic heritage, and thematic routes, supplemented by event tourism and shopping opportunities. These offerings are designed to cater to diverse tourist segments, providing a rich and varied experience that goes beyond the traditional sun and beach tourism (Junta de Andalucía, 2020).

In the pursuit of fostering a robust and sustainable tourism sector within the EuroGuadiana destination, a comprehensive strategic plan has been delineated to guide the development of tourism projects, programs, and initiatives from 2023 to 2027. This plan is anchored on nine strategic axes, each encompassing a series of actions designed to fulfill the strategic objectives identified during the diagnostic phase. Here, we delve into each axis and its respective line of actions, integrating them with the previously drafted article to present a cohesive and academically rigorous analysis. The provided list furnishes a comprehensive breakdown of the strategic axes, accompanied by their corresponding line of actions, intended to steer the development and governance of the EuroGuadiana region's tourism sector. This strategic framework encapsulates a diverse array of initiatives, addressing various facets of tourism management, encompassing governance, infrastructure development, sustainability, and marketing. Its structured presentation serves to facilitate a clear understanding of the multifaceted approach required to foster tourism growth in the EuroGuadiana region (Villanueva et al., 2022), but that can also be the starting point for a more robust cross-border cooperation (Villanueva et al., 2022).

1) Tourism Governance

- Networking: Focus Group
- Streamlining Procedures
- Crisis Management: Contingency Plans and Action Protocols
- Active Tourist Listening System
- Local Awareness
- Code of Ethics

2) Management and Development of Tourism Products

- Coordination of the Tourist Offer
- Enhancement of Historical Heritage
- Water and Nature
- Cultural Tourism
- Sports Tourism
- Gastronomic Tourism
- Revitalization of Historic Shopping Centers
- City of Congresses

3) Accessibility and Tourism Infrastructure

- Improving Tourist Mobility
- Parking Optimization
- Public Transport Service Connecting Residential Nuclei
- Cyclomobility
- Tourist Signage

4) Technological Development

- Digitalization of the Eurocity Tourist Destination
- Digital Tourist Office

- 5) Training and Innovation
 - Continuous Training Plan for Tourism Companies
 - Revitalization of the Tourism Business Fabric
 - Tourism Innovation
- 6) Employability and Entrepreneurship
 - Training for Job Placement
 - Job Opportunities
 - Improving the Employability of People with Difficult Labor Insertion
 - Promotion of Entrepreneurship
 - Business Incubator of the New Tourism
- 7) Quality
 - Integral Quality System
 - Quality Certifications
 - EuroGuadiana Tourism Excellence Award
- 8) Promotion and Marketing
 - Positioning and Brand Management
 - Platform for the Offer of Tourist Services
 - Tourist Visualization of the Eurocity
 - Development of Promotional Elements
 - Digital Marketing
 - Social Media Management
 - Co-Marketing
 - Presence at Commercial and Promotional Events
 - Promotion of Domestic Tourism
 - Promotion of International Tourism
 - Development of Marketing and Promotion Plan by Type of Tourism
- 9) Sustainability Management
 - Co-Management of Sustainability
 - Energy and Water Efficiency and Waste Management
 - Sustainability Certifications
 - Management and Control of Tourist Load Capacity
 - Sustainability Awareness

The outlined strategic axes and their respective lines of action represent a comprehensive and forward-thinking approach to fostering a robust and sustainable tourism sector within the EuroGuadiana destination. By leveraging the unique assets and opportunities presented by the region, this strategic plan seeks to foster a vibrant and sustainable tourism sector that contributes to the economic and social development of the EuroGuadiana region. Integrating insights from the referenced literature, this analysis presents a cohesive and academically rigorous exploration of the potential pathways to achieving the strategic objectives outlined in the diagnostic phase, offering a blueprint for the sustainable growth and development of the EuroGuadiana tourism sector from 2023 to 2027.

3.3 Practical Implications

The connection between the strategic axes and the local focus groups is of paramount importance in the context of developing a comprehensive tourism strategy for the Eurocity of Guadiana. This section delves into the profound significance of this linkage, incorporating the six thematic pillars of the local focus groups: Sports and Tourism, Nautical Tourism, Heritage and Cultural Tourism, Natural Spaces and Nature Tourism, Sun and Beach Tourism, and the Management and Coordination of the destination “Eurocity of Guadiana.”

The Eurocity’s strategic axes provide a theoretical framework outlining broad goals and directions for the region’s tourism development. However, these axes remain abstract until they are grounded in the practical insights and perspectives of key stakeholders, including local residents, businesses, and commu-

nity organizations. The local focus groups, structured around the six thematic pillars, serve as a bridge between theory and practice, perfectly aligning with the strategic axes by addressing specific dimensions of the Eurocity's tourism sector.

This collaborative and inclusive effort not only brought together a range of perspectives but also fostered a platform for dialogue and shared experiences, driving the development of a comprehensive, sustainable tourism strategy. Based on the Local Focus Groups (LFG) report for the EuroGüadiana project six key themes can be drawn from them. For each thematic segment the participants provided concerns, ideas and actions.

1) Sport and Tourism

- Concerns: Need for better sports infrastructure.
- Ideas/Actions: Investment in sports facilities, organizing transborder sporting events.

2) Nautical Tourism and River Services

- Concerns: Lack of infrastructure and regulatory harmonization for nautical tourism.
- Ideas/Actions: Improvement in river services, establishment of a regulatory framework for nautical activities.

3) Cultural Heritage and Tourism

- Concerns: Preservation of cultural heritage and its integration with tourism.
- Ideas/Actions: Development of cultural tourism products, enhancing visitor experiences at cultural sites.

4) Natural Spaces and Nature Tourism

- Concerns: Conservation of natural spaces and promoting nature-based tourism.
- Ideas/Actions: Developing eco-tourism initiatives, educational programs on conservation.

5) Sun and Beach Tourism

- Concerns: Sustainable management of beach areas, extending the tourism season.
- Ideas/Actions: Diversifying beach tourism offerings, improving beach facilities.

6) Management and Coordination of the "Eurocity of Güadiana" Destination

- Concerns: Need for a unified tourism strategy, promoting cultural diversity and gastronomy.
- Ideas/Actions: Joint promotional efforts, creating a unified brand for the Eurocity.

Figure 2. Key Themes Derived by the Local Focus Groups in the EuroGüadiana

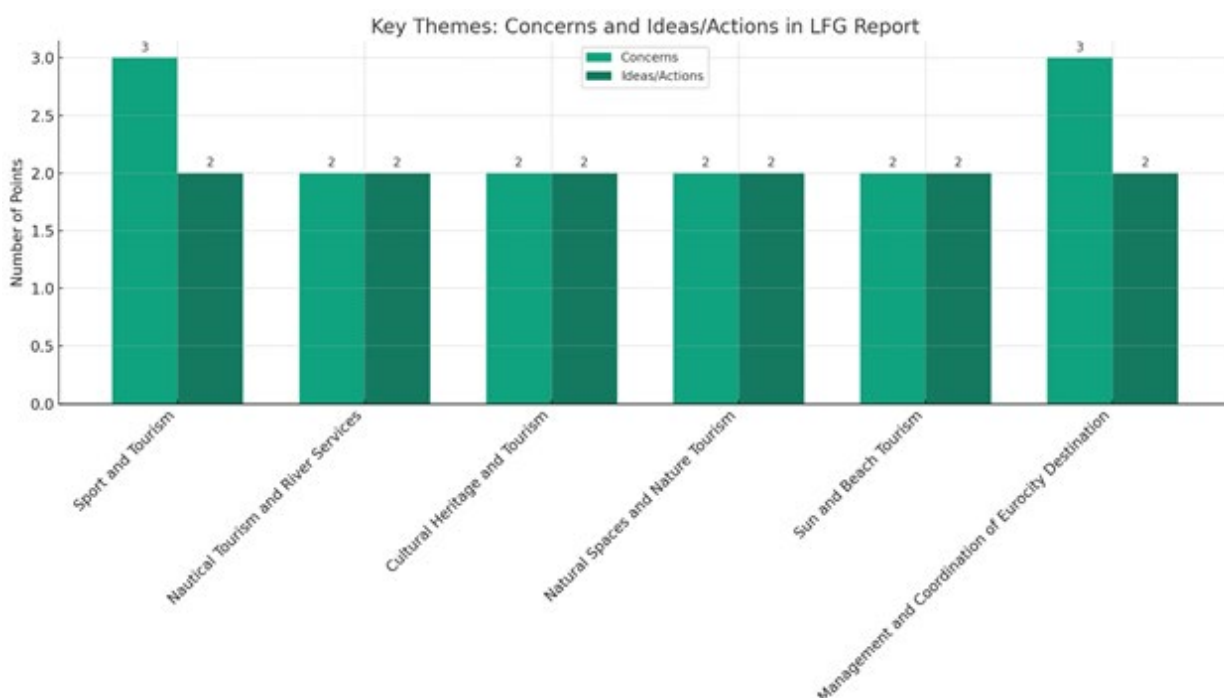


Figure 2 visualizes the key themes from the Local Focus Groups showing the number of main concerns and ideas/actions for each theme. This provides a clear and quantitative insight into the focus areas and the initiatives proposed during the focus group discussions.

- **Sport and Tourism:** Shows a higher emphasis on both concerns and proposed ideas/actions, indicating significant focus on enhancing this sector.
- **Nautical Tourism and River Services:** Equal emphasis on concerns and solutions, suggesting balanced discussion.
- **Cultural Heritage and Tourism:** Reflects an equal focus on identifying concerns and proposing solutions.
- **Natural Spaces and Nature Tourism:** Indicates a balanced approach to addressing concerns and offering ideas.
- **Sun and Beach Tourism:** Displays a similar pattern of concern and solution focus.
- **Management and Coordination of Eurocity Destination:** Highlights a higher number of concerns, pointing to the complexity and importance of this theme.

The primary results of these focus group meetings highlight specific concerns, ideas, and actions within each thematic area. These outcomes provide valuable input for the development of the Eurocity's tourism strategy. For instance, concerns related to seasonality, infrastructure, personnel qualifications, and communication strategies are meticulously detailed, accompanied by corresponding ideas and actions to address these issues.

The main conclusions of the meeting serve as a critical foundation for shaping and fortifying Eurocity Guadiana's tourism strategy. These conclusions stem from the invaluable input of diverse stakeholders who possess a vested interest in the sustainable growth of the city. The implications of these findings extend beyond mere observations; they are the catalysts for actionable steps that will significantly impact the city's tourism development.

Collaborative Stakeholder Engagement: The meeting highlighted the active participation of stakeholders representing various facets of Eurocity Guadiana. This collective engagement reflects a shared commitment to the city's growth and well-being. It is paramount to harness this collaborative spirit to ensure that the tourism strategy aligns with the interests and needs of these stakeholders.

Translating Concerns into Action: The concerns, ideas, and suggested actions articulated during the meeting underscore the urgent need for intervention in several key areas. The tourism strategy must be tailored to address these concerns effectively, focusing on actionable initiatives that prioritize sustainability, preservation, and enhancement of Eurocity Guadiana's unique assets.

Holistic Approach to Tourism: The meeting outcomes emphasize the multifaceted nature of Eurocity Guadiana's tourism landscape. It is imperative to adopt a holistic approach that encompasses various dimensions, including beach tourism, management and coordination, sports and recreation, nautical tourism, natural spaces, and cultural heritage. This comprehensive strategy will ensure that the city's tourism sector thrives across diverse domains.

Resilience and Sustainability: The concerns raised, such as the preservation of natural spaces, the development of cultural tourism, and the improvement of sports infrastructure, underscore the importance of resilience and sustainability. The tourism strategy should prioritize these elements to ensure the long-term attractiveness and viability of Eurocity Guadiana as a destination.

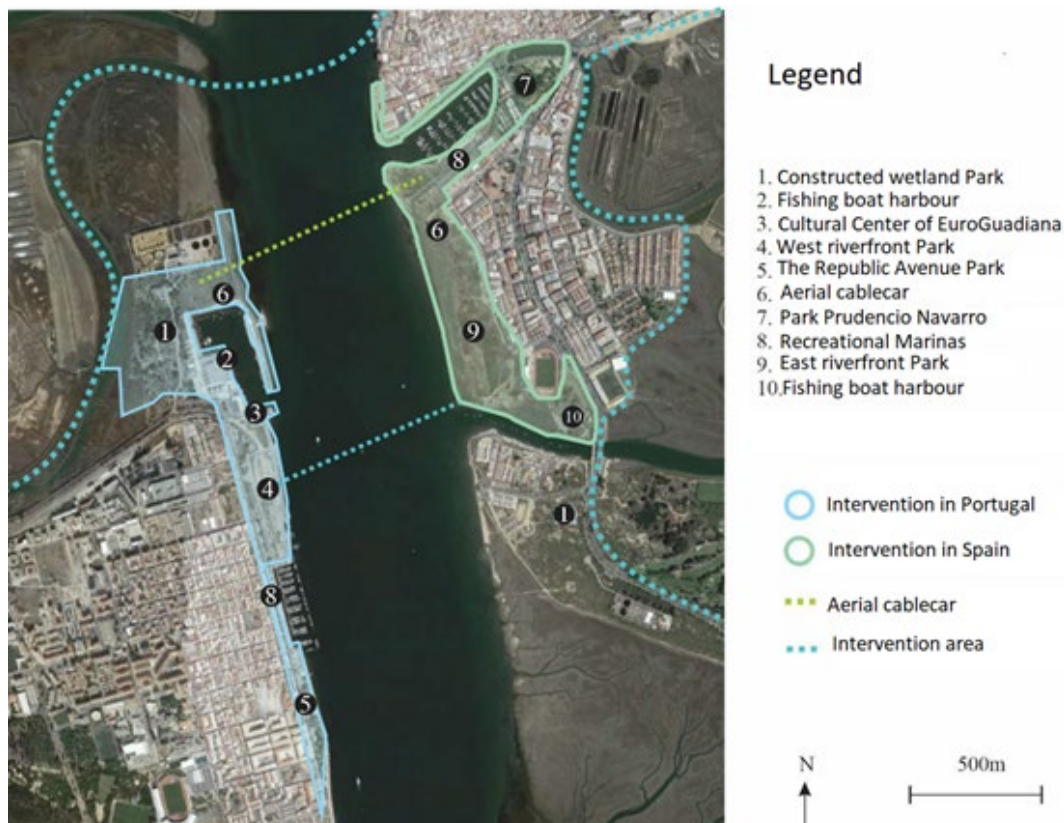
Cross-Border Collaboration: Given the city's cross-border nature, fostering collaboration and standardization with neighboring regions is paramount. Initiatives related to nautical tourism, river services, and cultural events must extend beyond city borders to create a seamless and enriched visitor experience.

Community-Centric Approach: The engagement of residents, students, and local communities in initiatives related to natural spaces, cultural heritage, and environmental education is critical. These actions not only enhance tourism but also cultivate a sense of ownership and pride among the local population.

The practical implication of the main meeting conclusions is the development of a tourism strategy that capitalizes on the collaborative spirit of stakeholders, addresses urgent concerns through actionable initiatives, embraces a holistic approach to tourism, prioritizes resilience and sustainability, fosters cross-border collaboration, and remains community-centric. By translating these implications into a co-

herent and actionable plan, Eurocity Guadiana can position itself as a thriving and sustainable tourism destination, meeting the diverse needs of its stakeholders while ensuring harmonious growth in the years to come. Based on the results of the LFG and the delineated tourism strategy aiming to improve the overall experience for travellers and the community a Masterplan for a green-blue infrastructure of the Eurocity of Guadiana was developed (Figure 3). The Masterplan provides a common strategy for mobility (Castanho et al., 2017, 2019) and recreation that serves both tourists and residents preserving the cultural and natural assets of the territory.

Figure 3. Proposal for a Green-blue Infrastructure for EuroGuadiana



Source: Google Earth adapted from Meris (2020)

4. Conclusion

The meticulous process of engaging local focus groups has proven to be an indispensable approach in crafting a visionary and sustainable strategy for the Eurocity of Guadiana as a burgeoning tourism destination. The focus groups, segmented into thematic clusters, have served as a fertile ground for the development of innovative ideas and actionable insights. These discussions have not only highlighted the existing strengths within each sector but have also brought to the fore critical areas that require concerted efforts and strategic interventions. The candid discussions within these groups have fostered a collaborative spirit, paving the way for a collaborative approach to tourism development that leverages the unique attributes of each sector.

Furthermore, this approach has encouraged a sense of ownership and vested interest among the local stakeholders. Their firsthand experiences and deep-rooted understanding of the local dynamics have contributed to a rich tapestry of insights, which have been instrumental in shaping a strategy that is both grounded in reality and aspirational in its vision.

Moreover, the focus group discussions have underscored the importance of cross-border cooperation and the creation of a cohesive brand identity that encapsulates the rich diversity and unique offerings of

the Eurocity. The proposed initiatives, such as the Eurocitizen smart card and the establishment of a joint tourism brand, reflect a forward-thinking approach that seeks to foster a seamless and enriched tourist experience.

The insights gleaned from these discussions have been instrumental in shaping a strategy that is not only responsive to the current market dynamics but also anticipatory of future trends and opportunities. The emphasis on innovation, coupled with a commitment to quality and excellence, positions the Eurocity of Guadiana as a destination that is poised to offer a rich and diverse array of tourism products that cater to a wide spectrum of interests and preferences.

As we forge ahead, the collaborative ethos that has been cultivated through this process will serve as a guiding principle. The collective wisdom and shared vision that have emerged from these discussions underscore the power of community engagement in shaping a future that is both prosperous and sustainable. Through a concerted effort that leverages the strengths of each sector, and through fostering a spirit of cooperation and mutual respect, the Eurocity of Guadiana stands on the cusp of a new era of tourism development that promises to bring unprecedented growth and prosperity to the region.

Thus, as we stand at this juncture, it is evident that the focus group approach has not only facilitated a deeper understanding of the complex landscape of the Eurocity's tourism sector but has also sown the seeds for a collaborative and harmonious future. A future where the Eurocity of Guadiana blossoms into a destination that is celebrated for its rich cultural tapestry, pristine natural environments, and a vibrant and sustainable tourism sector that serves as a beacon of excellence on the global stage.

The governance model of the Guadiana Eurocity is envisioned as inclusive and effective, fostering innovation and growth while maintaining the autonomy of individual cities. The strategy outlines a series of strategic objectives that aim to enhance the utilization of natural and cultural resources, improve tourist infrastructures, and foster the development of cross-border products. These objectives are aligned with the broader vision of creating a cross-border territory that leverages its natural, historical, and cultural identity to foster economic development and enhance the quality of life in the region (Associação de Defesa do Património de Mértola, 2012) but that can also materialize in the future a more sustainable quality of life for their populations with clear and participated definition of concerns but also improvements and definition of strategic objectives to be achieved (Castanho et al., 2018).

The Guadiana Eurocity's tourism development strategy represents a forward-thinking approach to regional development, aiming to transform the region into a central hub within the Andalusia/Algarve region. Through a focus on value proposition, destination identity, and strategic axes, the initiative seeks to foster economic valorization and create new tourism products that capitalize on the unique resources and opportunities present in the territory. By achieving the outlined strategic objectives, the initiative aims to strengthen the identity of the destination and diversify the tourist offer, fostering sustainable and inclusive growth in the region (Almeida, 2014).

ACKNOWLEDGEMENTS

This research has been financed by the Foundation for Science and Technology, Research Centre for Tourism, Sustainability and Well-being, grant number UIDB/04020/2020 and the Interreg V project 0592_EUROGUADIANA2020_5E: "Laboratório Europeu de governação transfronteiriça: Eurocidade do Guadiana 2020".

REFERENCES

- Almeida, N. F. (2014). *Turismo 2020 - Plano de Acção para o Desenvolvimento do Turismo em Portugal 2014-2020*. Tourism of Portugal.
- Associação de Defesa do Património de Mértola (2012). *O Desenvolvimento Turístico e a Sustentabilidade no Baixo Guadiana. Uma Análise prospectiva para o ano 2025*. ADPM.
- Ayamonte City Council (2017). *Integrated Sustainable Development Strategy. Ayamonte looks at the river*. Ayamonte City Council.
- Castanho, R., Loures, L., Fernández, J., & Pozo, L. (2018). Identifying critical factors for success in Cross Border Cooperation (CBC) development projects. *Habitat International*, 72, 92-99. <http://dx.doi.org/10.1016/j.habitatint.2016.10.004>

- Castanho, R., Vulevic, A., Fernández, J., Fernández-Pozo, L., Gómez, J., & Loures, L. (2017). Accessibility and connectivity – Movement between cities, as a critical factor to achieve success on cross-border cooperation (CBC) projects. A European analysis. *Sustainable Cities and Society*, 32, 181-190. <https://doi.org/10.1016/j.scs.2017.03.026>.
- Castanho, R., Gómes, J., & Kurowska-Pysz, J. (2019). How to reach the Eurocities? A retrospective review of the evolution dynamics of urban planning and management on the Iberian peninsula territories. *Sustainability*, 11, Article 602. <http://dx.doi.org/10.1016/10.3390/su11030602>
- Cercania (2019). *Ayamonte Master Plan*. Cercania Consultants.
- Figuerola, M., Guimarães, A., Machado, C., Pardo, M. C., & Pardo, M. J. (2018). *Strategic action plan for the development and promotion of Spain-Portugal border tourism*. GALAXIPOTENTIAL.
- Frank, A. G. (2002). The Development of Underdevelopment. In J. T. Roberts & A. B. Hite (Eds.), *The Globalization and Development Reader: Perspectives on Development and Global Change* (pp. 309-318). Blackwell Publishers.
- Galtung, J. (1971). A Structural Theory of Imperialism. *Journal of Peace Research*, 8(2), 81-117.
- Harvey, D. (1973). *Social Justice and the City*. Johns Hopkins University Press.
- Junta de Andalucía (2020). *General Plan of Sustainable Tourism of Andalusia META 2027*. Junta de Andalucía.
- Loures, L., Panagopoulos, T., & Burley, J. B. (2016). Assessing user preferences on post-industrial redevelopment. *Environment and Planning B: Planning and Design*, 43(5), 871-892. <http://dx.doi.org/10.1177/0265813515599981>
- Lukoseviciute, G., & Panagopoulos, T. (2021). Management priorities from tourists' perspectives and beach quality assessment as tools to support sustainable coastal tourism. *Ocean and Coastal Management*, 208, Article 105646. <https://doi.org/10.1016/j.ocecoaman.2021.105646>
- Lynn, S. (2012). Conceptualizing Transborder Communities. In M. Rosenblum & D. Tichenor (Eds.), *Oxford Handbook of the Politics of International Migration* (pp. 456-477). Oxford Academic. <https://doi.org/10.1093/oxfordhb/9780195337228.013.0019>
- Naustdalslid, J. (2001). Rural Development and the Role of the Periphery. In P. Lowe, T. Marsden, & S. Whatmore (Eds.), *Rural Enterprise: Shifting Perspectives on Small-Scale Production* (pp. 123-139). Ashgate.
- Meris, M. C. O. (2020). O *landscape urbanism* como abordagem metodológica com vista à melhoria da resiliência dos ecossistemas urbanos: O caso de estudo da Eurogadiana. [Master Thesis, University of Algarve]. <http://hdl.handle.net/10400.1/16831>
- Padinha, D., Miguel, S., & Almeida, C. R. (Coordinators) (2015). *Strategic Marketing Plan for Tourism of the Algarve 2015-2018*. Região de Turismo do Algarve.
- Palomo Marín, F. J., Sánchez Álvarez, F. J., Varas Pérez, J. A., & Vidal Galván, I. (2019). *Tourist products from the border between Spain and Portugal*. Innode Strategic Consulting.
- Panagopoulos, T., Duque, J. A. G., & Dan, M. B. (2016). Urban planning with respect to environmental quality and human well-being. *Environmental Pollution*, 208, 137-144. <https://doi.org/10.1016/j.envpol.2015.07.038>
- Pazos-García, F. J., Bahamonde-Rodríguez, M., Jurado-Almonte, J. M., García-Delgado, F. J., Felicidades-García, J., & Márquez-Domínguez, J. A. (2019). Identification of ecotourism products that value the natural spaces of Bajo Guadiana. POCTEP 0007-VALAGUA-5-P.
- Pulido-Fernández, J. I., & López-Sánchez, Y. (2016). The destination value chain as an innovative tool for the analysis of the sustainability of tourism policies. The case of Spain. *Innovate*, 26(59), 155-176. <http://dx.doi.org/10.1016/10.15446/innovar.v26n59.54369>
- Rokkan, S. (1999). *State Formation, Nation-Building, and Mass Politics in Europe: The Theory of Stein Rokkan*. Oxford University Press.
- Smith, J. (2015). Centre and Periphery: A Review in Social Sciences. *Journal of Social Science Studies*, 3(1), 123-139.
- Sociedade de Avaliação Estratégica e Risco (2005). Reinventing tourism in Portugal. Estratégia de desenvolvimento turístico português no 1º Quartel do Século XXI, Volume IV. Visão de conjunto e recomendações para a concretização da estratégia. Saer. http://www.saer.pt/up/UPLOAD-bin2_imagem_0065560001369825885-485.pdf
- Terkenli, S. T., Zivojinovic, I., Tomićević-Dubljević, J., Panagopoulos, T., Straupe, I., Toskovic, O., Kristianova, K., Straigyte, L., O'Brien, L., & Bell, S. (2017). Recreational use of urban green infrastructure: The tourist's perspective. In D. Pearlmutter (Ed.), *The Urban Forest. Future City* (pp. 191-216), Springer. https://doi.org/10.1007/978-3-319-50280-9_16
- Terkenli, T., Bell, S., Toskovic, O., Tomicevic, J. D., Panagopoulos, T., Straupe, I., Kristianova, K., Staigyte, L., O'Brien, L. & Zivojinovic, I. (2020). Tourist perceptions and uses of urban green infrastructure: an exploratory cross-cultural investigation. *Urban Forestry Urban Greening*, 49, Article 126624. <https://doi.org/10.1016/j.ufug.2020.126624>
- Turisme (2016). *Resource guide for local managers: Methodological notes for the preparation of tourism planning documents for the tourist spaces of the Valencian Community*. Tourism.
- Tourism of Portugal. (2017). *Tourism Strategy 2027*. Tourism of Portugal.
- United Nations. (2015). *Transforming our world: the 2030 Agenda for Sustainable Development*. United Nations General Assembly.

- Valls, J. F., & Neves, J. M. O. (2014). Strategic planning of tourist destinations. In D. Flores (Ed.), *Manual de gestión de destinos turísticos* (pp. 63-95). Tirant Humanidades.
- Vieira, T. A., & Panagopoulos, T. (2024). Urban agriculture in Brazil: Possibilities and challenges for Santarém, eastern Amazonia. *Land Use Policy*, 139, Article 107082. <https://doi.org/10.1016/j.landusepol.2024.107082>
- Villanueva, J., Kidokoro T., & Seta F. (2022). Cross border integration, cooperation and governance: a systems approach for evaluating good governance in cross-border regions. *Journal of Borderlands Studies*, 37, 1047-1070. <https://doi.org/10.1080/08865655.2020.1855227>
- World Commission on Environment and Development. (1987). *Our Common Future*. Oxford University Press.

ORCID

Thomas Panagopoulos  <https://orcid.org/0000-0002-8073-2097>

Pooyan Sedarati  <https://orcid.org/0000-0003-2309-5383>

Joaquim Pinto Contreiras  <https://orcid.org/0000-0003-0743-6096>

Notes on contributors

Thomas Panagopoulos is a Professor of landscape architecture, with MSc in renewable natural resources and PhD in forestry and natural environment. He has been department head of landscape architecture, and master's degree director at the University of Algarve, Portugal. He has acted as principal investigator in a total of approved funding of over 8 million euros. Besides, he has vast experience in working on many European and private projects. In 2023 was one of the most cited scientists from the University of Algarve according to the latest update of the "World's Top 2% Scientist list", published by Stanford University.

Pooyan Sedarati had his Ph.D. in Sustainable Smart Tourism Ecosystems from the University of Algarve in 2021. He is a Postdoctoral researcher with expertise in Complex System Analysis, Systems Thinking, System Dynamics, and Smart Tourism. More than 5 years of experience in project development and management with focuses on sustainability, sustainable certification, and sustainable strategies. Worked for the SUSTOWNS MED project and the EuroGadiana2020 Interreg project. Right now seeking to utilize leadership expertise with an organization that offers a dynamic working environment and access to personal development opportunities.

Joaquim Pinto Contreiras had a PhD in 2011 from the University of Évora in Management, specializing in Ethics and Corporate Social Responsibility. Master's degree in Human Resources Development Policies from ISCTE in 2004. Currently a researcher at CinTurs - Research Centre for Tourism Sustainability and Well-being. Experience in supervising master's theses in the areas of Human Resources Management and Ethics and Corporate Social Responsibility, and regularly take part in master's exam juries, either as chair, examiner or supervisor. Publications reflect these interests, covering management, human resources management, social responsibility and sustainability. In the last five years published 7 articles in indexed journals.