

	SOSYAL ARAŞTIRMALAR VE YÖNETİM DERGİSİ (SAYOD) *** JOURNAL OF SOCIAL RESEARCH AND MANAGEMENT	
E-ISSN: 2667 - 5897	https://dergipark.org.tr/tr/pub/sayod	Paper Type: Research Article Makale Türü: Araştırma Makalesi
Sayı: 1 ,Eylül 2025	Issue: 1, September 2025	Received Date / Geliş Tarihi: 09/09/2025 Accepted Date / Kabul Tarihi: 23/09/2025
HAVACILIK YÖNETİMİ LİSANS EĞİTİMİNDE SÜRDÜRÜLEBİLİRLİK EĞİTİM İHTİYACININ DEĞERLENDİRİLMESİ: TÜRKİYE ÖRNEĞİ **** EVALUATION OF THE NEED FOR SUSTAINABILITY EDUCATION IN AVIATION MANAGEMENT UNDERGRADUATE TRAINING: A CASE STUDY OF TÜRKİYE		
Atıf / to Cite (APA): Akduman, G. ve Öksüz Taner M. (2025). Evaluation of the need for sustainability education in aviation management undergraduate training: A case study of Türkiye. Sosyal Araştırmalar ve Yönetim Dergisi, (1), 66-77.		Gülbeniz AKDUMAN** Merve ÖKSÜZ TANER**
DOI: https://doi.org/10.35375/sayod.1780750		

ÖZ

Bu çalışma, Türkiye'deki Havacılık Yönetimi lisans programlarında sürdürülebilirlik eğitiminin mevcut durumunu değerlendirmeyi ve sektörün ihtiyaç duyduğu sürdürülebilirlik odaklı insan kaynağının yetiştirilmesine yönelik öneriler geliştirmeyi amaçlamaktadır. Araştırma kapsamında, Türkiye'deki üniversitelerin Havacılık Yönetimi lisans programlarının müfredatları incelenmiş ve sürdürülebilirlik ile doğrudan ilişkili derslerin varlığı, kapsamı ve müfredata entegrasyon düzeyi analiz edilmiştir. Bulgular, Türkiye'deki programlarda sürdürülebilirliğin müfredata sistematik olarak entegre edilmediğini, çoğunlukla seçmeli düzeyde kaldığını veya mevcut dersler içinde dağınık şekilde işlendiğini ortaya koymaktadır. Küresel havacılık sektörünün sürdürülebilirlik hedefleri ve Avrupa'daki önde gelen havacılık okullarının müfredatlarıyla yapılan karşılaştırmalı analiz, Türkiye'deki programların bu alanda önemli bir açığı olduğunu göstermektedir. Çalışma, sürdürülebilirliğin çekirdek müfredata dahil edilmesi, disiplinlerarası iş birliklerinin geliştirilmesi, endüstri ile ortak projeler yürütülmesi ve uluslararası sertifikasyon programlarının entegrasyonu gibi önerilerle sonuçlanmaktadır. Bu önerilerin, havacılık yönetimi eğitimi küresel standartlara taşıyacağı ve sektörün sürdürülebilir dönüşümüne nitelikli insan kaynağı sağlayacağı öngörülmektedir.

Anahtar Kelimeler: Sürdürülebilirlik, Sürdürülebilirlik Eğitimi, Eğitim, Havacılık Yönetimi, Sürdürülebilir Havacılık Yönetimi

ABSTRACT

This study aims to assess the current status of sustainability education in undergraduate Aviation Management programs in Türkiye and develop recommendations for training the sustainability-focused human resources needed by the sector. The study examined the curricula of undergraduate Aviation Management programs at Turkish universities and analyzed the presence, scope, and level of integration of directly relevant sustainability-related courses. The findings reveal that sustainability is not systematically integrated into the curriculum in Turkish programs, remaining mostly at an elective level or being covered scattered throughout existing courses. A comparative analysis of the global aviation sector's sustainability goals and the curricula of leading European aviation schools reveals a significant gap in Turkish programs in this area. The study concludes with recommendations, including integrating sustainability into the core curriculum, developing interdisciplinary collaborations, conducting joint projects with industry, and incorporating international certification programs. These recommendations are anticipated to elevate aviation management education to global standards and provide

**Doç. Dr., Fatih Sultan Mehmet Vakıf Üniversitesi, İnsan ve Toplum Bilimleri Fakültesi, Havacılık Yönetimi Bölümü, gakduman@fsm.edu.tr, ORCID ID: <https://orcid.org/0000-0002-3256-982X>

**Doç. Dr., Başkent Üniversitesi, Ticari Bilimler Fakültesi Turizm İşletmeciliği, merveoksuz@baskent.edu.tr, ORCID ID: <https://orcid.org/0000-0003-2470-7919>

qualified human resources for the sector's sustainable transformation. **Keywords:** Healthcare, Leadership, Emotional leadership.

Keyword: Sustainability, Sustainability Education, Education, Aviation Management, Sustainable Aviation Management.

1. INTRODUCTION

Today, sustainability has become crucial for both businesses and consumers. In 2015, the United Nations adopted the "Sustainable Development Goals," an action plan comprising 17 distinct themes and 169 sub-goals for its member countries, aimed at eradicating poverty and achieving a cleaner, more equitable life. It called on all countries to embrace these principles. In the 21st century, sustainability is often associated with climate change or global warming, and sustainability goals aim to minimize the damage humans inflict on the Earth (Gössling and Scott, 2018; Kasa et al., 2025). The core principle of sustainability is that our already scarce world resources should be used more carefully and with consideration for future generations by businesses and people with unlimited desires. Sustainability is addressed in three dimensions: economic, socio-cultural, and environmental. National and international studies on sustainability are being conducted worldwide, prompting many businesses to transform. Businesses are increasingly developing policies and plans to adapt to these new competitive conditions and the dynamic sustainability landscape. By integrating sustainability into their business practices and infrastructure, businesses reduce costs in the long term and maximize the use of their resources (Doganis, 2019). Therefore, businesses have begun to view sustainability as a corporate responsibility of their structures (Torum and Küçükylmaz, 2009). In a globalizing world, sustainability or sustainable development is much more than adaptation or compliance (Yeni, 2014). A company's brand value is built through sustainable development. Sustainability practices are being increasingly adopted by an increasing number of businesses, especially in the aviation sector (Lee et al., 2024).

When sustainability is considered a "change" or "dynamism," businesses must manage and direct all their resources accordingly, examine new investments from a sustainability perspective, and even reconsider the entire technical or organizational structure. These changes must align with the needs and harmony of both older and younger generations. Therefore, aligning and implementing sustainability principles is a long process, and human resources must be trained and educated accordingly (Yapıcı, 2003). To train and adapt relevant human resources to the system, programs and courses with "sustainability" content should be added to the existing education system.

While we frequently see sustainability practices today in areas such as food, tourism, and industrialization, it is clear that the aviation sector, due to its inherently high energy consumption, high food waste, excessive energy consumption, and negative impact on air quality, is another sector that needs to implement sustainability policies (Akduman and Karahan, 2025). To minimize or measurably mitigate these negative impacts, the International Air Transport Association (IATA) has set action-based targets for the aviation sector, such as using more conscious and sustainable (SAF) fuels (Barutçu and Çolakođlu, 2024), separating waste, and achieving net-zero carbon by 2050 (IATA, 2023). In addition, for a more sustainable world, the State Airports Authority (DHMI) has prioritized environmental policies in its operations, emphasizing waste reduction, minimizing greenhouse gas emissions, optimizing energy resources, and providing training to raise sustainability awareness among all stakeholders and employees. All of these should be action-based through environmental management systems (DHMI, 2023). Within the scope of sustainability practices, aviation revenues and fuel efficiency are identified as the top priorities for Turkish Airlines (Gelirli and Yařar, 2021). Furthermore, the air transport sector is directly affected by climate and weather conditions, in addition to the negative impacts of climate change. The aviation sector and climate change mutually influence each other

(Chapman, 2007). However, in all sectors, including the aviation sector, sustainability practices are also based on education and awareness. The primary objective of this research is to analyze the current status of sustainability education in Aviation Management undergraduate programs in Türkiye, identify the educational needs for developing sustainability-focused human resources required by the sector, and provide recommendations for curriculum development accordingly. In this context, the research questions were determined as follows:

- What extent is sustainability education integrated into undergraduate Aviation Management programs in Türkiye?
- What gaps exist in the integration of sustainability education into the curriculum?
- How can global best practices serve as a model for the development of programs in Türkiye?
- What curricula and educational policies should be developed to meet the aviation sector's need for trained human resources for its sustainability transformation?

This study first examines the role and importance of sustainability in the aviation sector and then examines the status of sustainability courses in undergraduate aviation management programs in Türkiye. In addition, to analyze the need for trained human resources related to sustainability in the aviation sector, sustainability courses in Turkish aviation management programs are examined, and conclusions are drawn.

This study is a pioneering investigation that systematically assesses the current status of sustainability education in undergraduate Aviation Management programs in Türkiye and identifies gaps in its integration. By emphasizing the importance of sustainability in the aviation sector, the study provides an academic and sectoral framework for transforming educational curricula in this direction. In addition, it proposes a roadmap for Türkiye's education programs to comply with global standards by conducting a comparative analysis with examples of best practice from around the world.

2. THE RELATIONSHIP BETWEEN AVIATION MANAGEMENT AND SUSTAINABILITY

Global climate change and environmental degradation are profoundly impacting the aviation sector, as they do all industries (Fuglestad et al., 2010). Despite the positive impacts of the aviation sector on economic growth and globalization, it also causes significant environmental damage, such as carbon emissions, noise pollution, and resource consumption (Forster et al., 2003). In this context, sustainability is no longer a choice for the aviation sector but an existential necessity. Sustainability has three fundamental components: environmental, social, and economic (Adams, 2004);

- **Environmental Sustainability:** Aviation is responsible for approximately 2-3% of global anthropogenic CO₂ emissions. Local air pollution caused by aircraft noise and takeoffs and landings has a significant impact on the health and quality of life of communities surrounding airports (Lee et al., 2021). Achieving the International Civil Aviation Organization's (ICAO) goal of net-zero carbon emissions in the aviation sector by 2050 requires radical innovations and investments such as sustainable aviation fuels (SAF), next-generation aircraft technologies, efficient operations, and carbon offset mechanisms (ICAO, 2019; Fleming and Ziegler, 2016).
- **Economic Sustainability:** The long-term profitability and stability of the sector depend on environmental sustainability. Carbon pricing mechanisms, environmental taxes, and shifting consumer preferences pose significant financial risks for unsustainable businesses (Forsyth, 2011). Conversely, airlines and airports that increase fuel efficiency, reduce waste, and adopt circular economy principles can achieve a competitive advantage by reducing operational costs (Fichert, 2020). Therefore, sustainability should no longer be viewed as a cost driver, but rather as a tool for value creation and risk management.

- **Social Sustainability:** Aviation is a global employment-generating industry that connects societies. Social sustainability includes fair working conditions, diversity and inclusion, engagement with local communities, and the equitable distribution of aviation's benefits globally (Eizenberg and Jabareen, 2017). In airport expansion projects, addressing local community participation and concerns is critical to maintaining the sector's social license (Allen et al., 2016).

2.1. Aviation Management Program and Sustainability Education

Traditionally, aviation management education has focused on operational efficiency, financial profitability, and safety management. However, the complex challenges of the 21st century demand a leadership approach that considers not only profit but also the planet and people. Therefore, integrating sustainability into aviation management education is crucial for preparing future industry leaders to address these challenges. It is concluded that sustainable aviation management education is the cornerstone of developing generations of managers who will maintain the long-term competitiveness and licensing of the industry.

It is the responsibility of educational institutions to equip aviation management students, who will become the future managers of the aviation industry, to meet these challenges and become sustainability-focused managers. Traditional curricula in aviation management programs fall short of meeting this need for the following reasons;

- **Adapting to changing industry dynamics:** Students must be knowledgeable about the global regulatory frameworks of both national and international aviation authorities. Technical topics such as sustainable aviation fuels (Freeman et al., 2018), electric and hybrid-electric propulsion systems, carbon capture technologies, and efficient flight management systems must now become an integral part of the curriculum (Ocheja and Yother, 2025).
- **Developing leadership and ethics:** Sustainability is an ethical imperative for every sector in today's business world (Muff, 2013). Aviation education programs should provide students with an ethical decision-making framework that balances short-term financial gains with long-term environmental and social outcomes (OECD, 2012). This requires teaching concepts such as systems thinking and stakeholder theory (Freeman and McVea, 2001).
- **Business Model Innovation:** Future aviation managers should be encouraged to design carbon-neutral business models based on circular economy principles. This is not only through operational efficiency, but also through rethinking the value proposition itself (e.g., plane sharing, multimodal transportation solutions) (Hari et al., 2015).

3. METHOD

This study, conducted to assess the need for "sustainability education" courses in undergraduate aviation management programs in Türkiye, utilized secondary data. The data was compiled from existing public documents, not through an original survey or interview. This study employs a survey model, aiming to describe current conditions as they are. Specifically, data were collected from official university documents (websites, curricula, and the YÖK Atlas database) using both documentary scanning and institutional scanning.

The research employed a qualitative research method. Rather than digitized statistical data, the data was based on descriptive analysis of qualitative data such as the content, names, requirements, and hours of existing courses. The primary data collection technique was data documentation analysis. Data on "sustainability education" courses in undergraduate aviation management programs in Türkiye were first

scanned from the Council of Higher Education (YÖK) ATLAS website between July and August 2025, and then tabulated on university websites. This study is cross-sectional because it captures the situation at a specific point in time (July-August 2025). Descriptive analysis was used in data analysis; the data were tabulated, presented, and interpreted using frequency (number) and percentage distributions. Given that sustainability is education- and awareness-based, recommendations were made regarding how to train human resources in aviation management education in Türkiye within the scope of "sustainability" and how to advance sustainability practices further.

4. FINDINGS AND DISCUSSION

An examination of the curricula of universities in Türkiye with "Aviation Management" departments, based on information available on relevant websites, reveals that undergraduate Aviation Management programs in Türkiye are generally offered within the faculties of Business Administration, Economics, Humanities, and Social Sciences, or affiliated with Schools of Applied Sciences. This functional structure significantly shapes the curriculum content of the programs. An examination of aviation management curricula reveals that they are generally structured around four key components;

- **Business and Management Sciences Foundation:** The bulk of the programs consists of core management courses, including business administration, economics, accounting, finance, marketing, human resources management, and organizational behavior. This aims to provide graduates with a general management perspective that enables them to analyze the commercial operations of the aviation industry.
- **Aviation-Specific Specialization Courses:** The curriculum includes industry-specific courses such as hazardous materials, aviation law, airline marketing, air transportation, air traffic control procedures, airline operations, airport operations, and aviation safety and security. These courses aim to familiarize students with the industry's technical terminology, regulatory framework, and operational processes.
- **Foreign Language Development:** The program aims to teach English, the lingua franca of the aviation industry, and a second foreign language.
- **Practice and Professional Development:** Many programs encourage students to gain industry experience through mandatory internships. Additionally, activities such as interviews with industry professionals and tours of airports and maintenance centers aim to reinforce theoretical knowledge with practical application.

In order to analyze the level of integration of the subject of "Sustainability" into the curriculum in the aviation management departments of 28 universities in Türkiye and TRNC, an analysis was carried out based on the state/foundation distinction of the universities, the compulsory status of the courses, course hours, and content diversity. The results of the analysis are presented in Table 1;

Table 1. Faculties with Sustainability-related Courses in Aviation Management Undergraduate Programs

No	University Name	State/ Foundation University	Course Name	Compulsory/ Elective Course	Weekly Hours (h/w)
1	Adana Alpaslan Türkeş Science and Technology University	State	Sustainability Management in Aviation	Compulsory	2
			Sustainability	Elective	3
2	Alanya Alaaddin Keykubat University	State	Sustainability in Aviation	Elective	2
3	Amasya University	State	Sustainability in Aviation Businesses	Elective	2
4	Erciyes University	State	-	-	-
5	Eskişehir Technical University	State	Sustainability in Aviation	Elective	3
6	Gaziantep University	State	Sustainable Aviation	Elective	3
7	Iğdır University	State	Aviation and Sustainability	Elective	3
8	İskenderun Technical University	State	-	-	-
9	Kocaeli University	State	-	-	-
10	Necmettin Erbakan University	State	-	-	-
11	Tarsus University	State	Sustainability	Elective	-
12	Fatih Sultan Mehmet Vakıf University	Foundation	Environment and Sustainability in Aviation	Elective	2
13	Hasan Kalyoncu University	Foundation	-	-	-
14	Istanbul Arel University	Foundation	-	-	-
15	Istanbul Aydın University	Foundation	-	-	-
16	Istanbul Bilgi University	Foundation	Sustainability and Environment in Aviation	Elective	3
17	Istanbul Esenyurt University	Foundation	Sustainability Management in Aviation	Elective	3
18	Istanbul Gelişim University	Foundation	Introduction to Sustainability	Compulsory	2
			Sustainability Management in Aviation	Compulsory	3
19	Istanbul Medipol University	Foundation	Sustainability Management in Aviation	Compulsory	3
20	Istanbul Nişantaşı University	Foundation	Sustainability and Environment in Aviation	Compulsory	3
21	Istanbul Okan University	Foundation	-	-	-
22	Istanbul Ticaret University	Foundation	-	-	-
23	Istanbul Topkapı University	Foundation	-	-	-
24	Özyeğin University	Foundation	Sustainability in Aviation	Compulsory	2
25	Turkish Aviation Association University	Foundation	-	-	-
26	Mediterranean Karpasia University	TRNC/ Foundation	-	-	-
27	Girne University	TRNC/ Foundation	Sustainable Aviation & Environment	Compulsory	3
28	Cyprus West University	TRNC/ Foundation	Aviation and Environment	Compulsory	3

Based on a review of 28 universities, 16 universities (57%) offer sustainability courses, with 14 located in Türkiye and 2 in Cyprus, while 12 (43%) do not. Of the 11 state universities, 7 (64%) have added the relevant course to their curriculum, while 4 (36%) have not. Of the 17 foundation universities, 9 (53%) offer sustainability courses, and 8 (47%) do not.

Of the 16 universities offering sustainability courses, 7 (44%) require this course. The average course time is 2.73 hours, indicating that the course is typically taught as a 3-hour elective or compulsory course per week.

There is no standard terminology for course titles. The most commonly used names are;

- Sustainability Management in Aviation: 3 universities.
- Sustainability in Aviation: 3 universities.
- Aviation and the Environment/Environment and Sustainability in Aviation: 3 universities.

Many courses directly link sustainability to environmental awareness and impacts. This parallels the sector's most visible sustainability issue: carbon emissions.

It is observed that foundation universities tend to adapt more quickly to current trends in the sector (such as sustainability) and make these courses mandatory. A key strength of programs in Türkiye is their direct integration with the sector's dynamic growth and their adoption of an industry-focused educational approach. Collaborations with airlines and airport operators enhance students' career opportunities. Furthermore, the inclusion of critical topics such as aviation safety and security in the curriculum ensures that graduates receive an education aligned with international standards. An examination of the program structure reveals several areas for improvement, particularly in terms of preparing them for the dynamics of the future sector;

- Limited Integration of Sustainability and Environmental Management: Sustainability, one of the top priorities in global aviation, is not systematically included in the curricula of many programs in Türkiye. Topics such as Sustainable Aviation Fuels (SAF), carbon management, environmental, social, and governance (ESG) criteria, and the circular economy are often covered in scattered ways within existing courses or are entirely overlooked. To address this gap, it is crucial to incorporate specialized courses, such as "Sustainable Aviation Management," into the curriculum.
- Lack of Interdisciplinary Collaboration: Programs largely remain confined to business administration, failing to establish sufficient interdisciplinary bridges with fields such as aeronautical engineering, meteorology, environmental sciences, and data analytics. However, modern aviation management requires integrating technical knowledge with managerial decision-making processes.
- Strengthening a Global and Technological Perspective: Curricula need greater depth in areas such as international aviation policies, digital transformation (artificial intelligence, big data), drone management, and cybersecurity in aviation. The global nature of the sector necessitates that graduates possess in-depth knowledge of international regulatory institutions and global market dynamics.

More than half of universities incorporate sustainability into their curricula, making it an essential component of modern aviation education. The high prevalence of compulsory courses in TRNC universities reflects their willingness to adapt to global trends. Course content focuses on "management" and "environmental" topics, addressing two critical areas of industry need. There is a significant lack of standardization in course titles, content, and hours. This can lead to discrepancies in the knowledge of graduates in this area. Most existing courses address sustainability solely from an "environmental"

perspective. However, sustainability requires a three-pronged approach: environmental, social, and economic. Topics such as social justice, ethical supply chains, and economic resilience need to be more fully integrated into course content. Course titles alone do not reveal whether engineering-focused topics, such as sustainable aviation technologies (SAF - Sustainable Aviation Fuels), electric/hybrid aircraft, and efficient engine designs, are adequately addressed. This represents a critical gap in the curriculum that needs to be addressed.

Leading aviation schools in Europe have made sustainability a core component of their curricula. A curriculum-based examination of sustainability-themed educational content, drawing on global examples and best practices, reveals the following examples;

- Amsterdam University of Applied Sciences (Netherlands): Joint "Zero Emission Airport" project with Schiphol Airport, students directly contributing to the airport's carbon neutrality process, and the curriculum's requirement to comply with EU Green Deal directives.
- Embry-Riddle Aeronautical University (USA): Existence of the Sustainable Aviation Center, the SAF research consortium with Boeing, Airbus, and the mandatory "Aviation and Climate Change" course for all students.
- Singapore Aviation Academy: Student participation in the Changi Airport renovation project, sustainability modules specific to the Asia-Pacific region, and joint certification programs with ICAO.

Table 2. The Main Differences Between the Turkish and EU Models

Criterion	Situation in Türkiye	Situation in EU Countries	Analysis and Recommendations
Curriculum Structure	Predominantly elective courses	Core curriculum integration	Need for a compulsory "Sustainable Aviation" course
Content Depth	Basic environmental topics	SAF technologies, hydrogen fuels, ESG reporting	Need to develop technology-focused content
Industry Integration	Internships and field trips	Joint R&D projects, postgraduate collaborations	Project-based education with THY, TAV, and other stakeholders
International Certification	Limited	IATA, ICAO accredited programs	Need to develop and promote internationally recognized certification programs

5. CONCLUSION AND RECOMMENDATIONS

The aviation industry is witnessing one of the most significant transformations in its history. Sustainability is at the heart of this transformation, shaping the industry's future existence and legitimacy. The education provided in aviation management departments, which train future aviation industry managers, is also directly impacted by this change. Universities and institutions offering aviation management education should integrate sustainability principles into their curricula and take an active role in developing leaders who will manage change, foster innovation, and lead the industry toward a more equitable, green, and profitable future. This is the academic and social responsibility of educational institutions, not only to the industry but also to the global community.

Of the 28 universities examined in the study, 16 (57%) offered a course on aviation and sustainability. There was no significant difference in the rate of course offerings between state and foundation universities. However, it is noteworthy that universities in the TRNC incorporate this course into their curricula to a greater extent and often make it mandatory. An examination of the compulsory nature of the courses reveals that foundation universities offer the subject as a compulsory course more frequently. This may indicate the flexibility of foundation universities to adapt more quickly to current demands and global trends in the sector. Class hours are generally set at 2 or 3 hours per week, with an average of 2.73 hours per week. This suggests that the topic is generally covered within the scope of a single course. A distinct lack of standardization is evident in course titles. "Sustainability Management in Aviation," "Sustainability in Aviation," and "Environment and Sustainability in Aviation" are the most commonly used titles. This diversity in terminology likely hints at differences in course content. Furthermore, the emphasis on "management" in course titles suggests that the subject is addressed more from a business and management perspective. Similarly, the frequent association of sustainability with "environment" suggests a focus on carbon emissions, the sector's most pressing issue. One of the most significant shortcomings of the current situation is the potential lack of a holistic approach to sustainability. The concept of sustainability encompasses not only its environmental dimension but also a strong social and economic dimension. It is unclear whether current course content adequately addresses other critical areas, such as ethics, social responsibility, economic resilience, and sustainable aviation technologies (e.g., green fuels and efficient designs). Furthermore, the fact that the 12 universities that do not offer this course fail to include this important topic in their curricula could create a gap in the education of future aviation professionals.

According to research findings, it can be said that sustainability awareness is beginning to take root in aviation education in Türkiye. However, there is a significant need for standardization and deepening in this area. A framework curriculum developed through interuniversity collaboration, enriching course content, and making the subject a mandatory course at more universities are vital in preparing the sector for a sustainable future. The future of the aviation sector depends on an education centered on this three-dimensional sustainability approach. Aviation management undergraduate programs in Türkiye are structured to impart the fundamental business and operational knowledge needed by the sector and, thanks to their strong ties to the industry, offer significant employment opportunities for graduates. However, the rapid pace of transformation in global aviation necessitates that these programs continually engage in a process of self-criticism and revision.

Curriculum reform, particularly focused on sustainability, interdisciplinarity, and digitalization, will enhance the competitiveness of programs both nationally and internationally, contributing to the development of more qualified human resources in support of Türkiye's goal of becoming an aviation hub. This transformation will be possible through the collaboration of academics, industry representatives, and regulatory bodies. Several paths can be suggested for a sustainability-centered transformation in aviation management education;

- Curriculum Reform: Sustainability should be integrated into the core curriculum. Mandatory and elective courses such as "Sustainable Aviation Management," "Aviation and Environmental Policy," and "Sustainable Logistics and Supply Chain Management" should be added to the curriculum. A working group comprising relevant stakeholders (Universities, SHGM, DHMI) should be formed to develop a framework curriculum proposal for sustainability education in aviation.
- Holistic Approach: Course content should be expanded to include all three dimensions of sustainability (environment, social, and economic).

- Integration into Existing Courses: Carbon accounting and sustainable investment should be covered in finance courses; green marketing and consumer behavior should be covered in marketing courses; and fuel efficiency and waste management should be covered in operations management courses.
- Industry Collaboration: Sustainability consortia should be established with airports and airlines. Case studies and projects should be conducted in collaboration with airlines and airports to help students solve real-world problems.
- Interdisciplinary Collaboration: Joint programs and courses should be developed with engineering, environmental sciences, sociology, and policy departments to provide a holistic perspective on the problem. Aviation Management departments should collaborate with Aeronautical Engineering, Environmental Engineering, and Business Administration departments to develop richer and more applicable content.
- Certification Programs: IATA and ICAO-approved certification programs.
- Simulation Centers: Sustainable airport simulation centers should be established.

This study was prepared based on the websites of universities offering Aviation Management education in Türkiye, information provided through corporate communication channels, and an assessment based on the YÖK Atlas database. This study's most significant limitation is that it serves as a guide for future research. The research reflects the curriculum structure for the September-October 2025 period and is limited in its ability to track dynamic curriculum changes over time. The depth of content and impact of sustainability courses on student outcomes were not measured with quantitative or qualitative data.

Analysis with a broader range of stakeholders (graduates, current students, airline representatives, etc.) regarding sustainability-themed courses and content in aviation management education programs would support more comprehensive results.

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