

## SAFETY AND SECURITY TRAINING IN AVIATION

Ebru Bağcı<sup>a1</sup> 

<sup>a1</sup>Istanbul Beykent University, Civil Air Transport Management, Civil Aviation Cabin Service Programme

### ARTICLE HISTORY

Received: 24.11.2024

Accepted: 24.12.2024

### KEYWORDS

Safety, Security,  
Aviation, Airline  
Companies, Training

### ABSTRACT

The cultural characteristics of the nations and the specific socio-economic conditions of the countries may cause the standards to be perceived differently in some applications. In this study, it is aimed to reveal the effectiveness of training on security and safety in the aviation sector. With the semi-structured interview questions prepared for this purpose, the data obtained by interviewing the trainers who organize and conduct the relevant trainings in the sector were interpreted with content analysis. According to the findings, it has been concluded that all applications for safety and security in the international arena are quickly and effectively integrated into all business lines in the national arena, the training activities and practices meet the expectations, and the training progresses in parallel with the international regulations.

## INTRODUCTION

In the transportation sector, the demand for airlines has been increasing in passenger and freight transportation in recent years. It is possible to say that the demand for airlines has increased compared to road, sea and railways, when the graphs of change in passenger and freight transport in Turkey by years are examined in a positive direction and proportional metrics are examined (UAB, 2021). Of course, the supply will need to increase in proportion to the increase in demand. The fact that the aviation sector has different dynamics from other sectors makes it necessary to act according to these dynamics in increasing the supply.

At the forefront of these dynamics is the perception, implementation and necessities of safety and security in the sector. Air transportation has security procedures at international standards, as it is the first corridor of countries' doors to the world. While countries can determine procedures and practices in different sectors according to their own internal functioning, this is not possible in the aviation sector. However, the perception of the employees working in the sector under the influence of environmental factors may be different. This difference can lead to differences in applications.

In this study, by examining the security training and practices in the aviation sector, which is subject to international regulations, it has been tried to reveal the knowledge and awareness of the Turkish citizen employees working in Turkey and abroad, together with their knowledge and awareness, and it has been discussed whether there are differences in practice between different countries and Turkey in the trainings received.

## LITERATURE REVIEW

### Conceptual Framework

Although the concepts of safety and security are used interchangeably in daily life, the concepts are different from each other in terms of meaning. In different languages, the two concepts are defined separately. In English, "safety" is a state of no danger, safety, a situation where there is a possibility of a bad situation but an undesirable situation, while "security" is used for situations of being away from threat and danger. Safety in aviation is based on the premise of foresight, learning from failures and past experience. Safety; It is to create a strategy to prevent the danger situation with the reference of known, identified serious problems and threats (Settles, Keane, Anderson, ve Gatto, 2003; Kornecki ve Liu, 2013; Pettersen ve Bjørnskau, 2015).

<sup>1</sup> Corresponded Author: [ebru@romayajournal.com](mailto:ebru@romayajournal.com)

Safety encompasses all strategies to ensure that risks to hazards are evaluated in terms of probability and severity and are at an acceptable level. Security, on the other hand, is aimed at reducing the severity of risks (Nakanishi, 2008). While safety aims to create a behavior, security aims to reduce the negative impact of the result of the behavior. The main purpose of aviation security is to provide protection against illegal acts (Miziuk, 2014).

In the ICAO (2013) Safety Management Manual (SMM), safety in the aviation context is defined as “the state in which the likelihood of harm to people or property is reduced to, or maintained at, an acceptable level through an ongoing process of hazard identification and safety risk management”. Since aviation is a dynamic sector, all strategies should be created for safety and comply with this dynamism.

Security is; landside, landside-periphery, general perimeter, crew, controlled areas, areas with security restrictions, passenger and cabin baggage screening, personnel and crew screening, aircraft access control, aircraft security search/control, hand baggage reconciliation, hand baggage screening, hand baggage protection, postal acceptance; scan; protection, security control of in-flight equipment; protection; airport supplies security checks; protection, insider threats, illegal passenger, ground sabotage, in-flight precautions, weapon or armed person It is defined by more concrete measures in the categories of transportation, unmanned aerial vehicles, other criminal acts, passenger admission, and cyber security (IATA, 2020).

The concept of security within the aviation sector was previously considered only as the activeness of the devices in the technical sense. The damage was evaluated within the framework of the losses experienced as a result of aircraft accidents and massacres. In short, safety and security had to be narrowly evaluated. However, the development of technology, the fact that the planes are close to perfection, and that they could not prevent events that cause damage such as accidents, massacres and sabotage, aviation authorities needed to conduct root cause research. As a result of these studies, it has been revealed that nearly 80% of safety and security-related incidents are caused by human factors. The human factor is; The effects of individuals' physiological and psychological states on events are evaluated. physiological and psychological state of the individual; influences perceptions, thoughts and behaviors. Even in an environment where security is thought to be fully ensured, the personal psychological states of individuals can disrupt the security of the environment (Çetinguç, 2016:213-240).

Apart from individual situations, situations before states are also important within the scope of aviation security. States are required to carry out all regulations regarding the safety of those aircraft after aircraft registration and to constantly control the implementation processes of this (Brusakova, et al., 2020:545). There are many international organizations in the position of authority for security practices. These organizations determine security practices and principles and share them with aviation organizations in particular countries. Along with these organizations, there are various associations that join private organizations for the development of security systems. These associations undertake missions such as optimizing technological products used in security applications, being a consultation center, and establishing relations with stakeholders as decision makers in establishing procedures related to quality, safety and compliance (Assa-I, 2022; ICAO, 2022; IATA, 2022).

## **METHODOLOGY**

### **Research Method**

This research was designed in accordance with the qualitative research method. Qualitative research is a process of inquiry that explores a social or human problem, based on different methodological traditions on research. The researcher creates a complex, holistic picture, analyzes the words, reports the statements of the participants, and conducts the study in a natural setting. Qualitative research is based on observations and interpretations of people's perceptions of different events, taking a snapshot of people's perception in a natural setting (Khan; 2014).

### **Information on Participants**

The participants of the research consist of 17 people working in different positions, who have attended trainings on safety and security working in the aviation industry.

Participants were selected by purposive sampling. While developing purposeful sampling, researchers use their special knowledge or expertise in relation to some groups to select subjects that represent this universe (Berg; 2021).

## Data Collection Tools, Process and Analysis

Commonly, in qualitative research, data is collected through participant observation, in-depth interviews, and focus groups. In-depth interviews are ideal for collecting data on individuals' personal histories, perspectives, and experiences, especially when investigating sensitive topics (Qualitative Research Methods: A Data Collector's Field Guide). In this study, a semi-structured interview form developed by the researcher and shared with the experts was used in accordance with the purpose and sub-objectives of the research in order to collect qualitative data.

The semi-structured 10-question interview form created on the subject was presented to the expert opinion and the final approvals for the interview form were obtained by making adjustments in line with their suggestions. Afterwards, the participants were interviewed over the phone for an average of 30 minutes.

By using the research data content analysis method; It was analyzed in the Maxqda 2022 package program. Since content analysis is an inductive type of analysis, it focuses on the origins of the investigated phenomenon or event (Parveen and Showkat., 2017). In content analysis, data obtained through interviews, observations or documents are analyzed in four stages: (1) coding the data, (2) finding the codes, categories and themes, (3) organizing the codes, categories and themes, and (4) defining and interpreting the findings. (Eysenbach and Köhler, 2002). Coding consistency of the researchers was ensured for the reliability of the study.

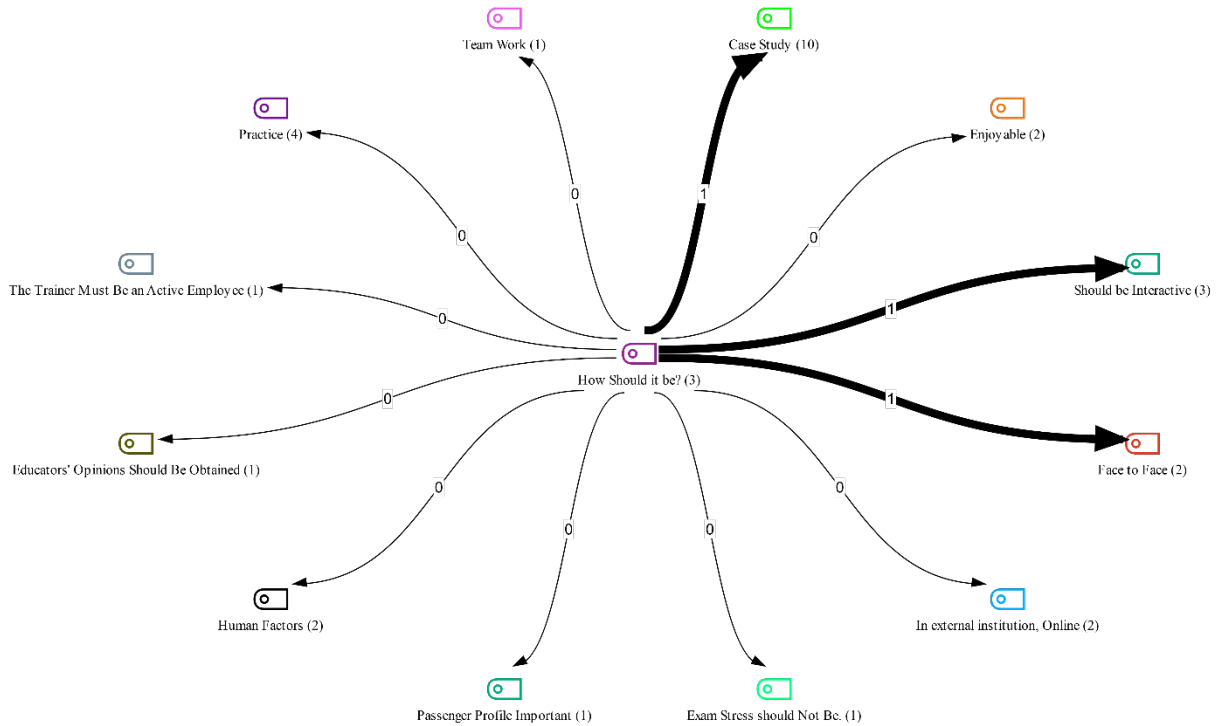
## RESULTS

Information on the demographic data of the participants is shown in Table 1. Although the majority of the participants (76.5%) are male, 47.06% of the total participants had a Bachelor' s Degree. In terms of working experience in the aviation sector, the number of participants who have experience in the range of 6-15 years is higher than the number of other participants (47.06%).

**Table 1. Demographic Characteristics of the Participants**

	f	%
Gender	17	100,00
Female	4	23,5
Male	13	76,5
Educational Status	17	100,00
High School	1	5,88
Associate degree	2	11,76
Bachelor' s Degree	8	47,06
Postgraduate	5	29,41
Doctorate	1	5,88
Marital Status	17	100,00
Married	11	64,71
Single	6	35,29
Professional Seniority	17	100,00
1-5 Years	3	17,65
6-15 Years	8	47,06
16-25 Years	5	29,41
26+ Years	1	5,88
Profession	17	100,00
Training Unit Manager	3	17,64
Cabin Crew	3	17,64
Pilot	4	23,52
Ramp Agent (Operation)	5	29,44
Aircraft Technician	2	11,76
Age	17	100,00
20-25	1	5,88
26-35	9	52,94
36-45	5	29,41
46+	2	11,76

The code co-creation model related to the evaluation of the participants who received training on safety and security from aviation sector employees on how the training should be done is given as Model 1.



### Model 1. Conflicting Codes Pattern

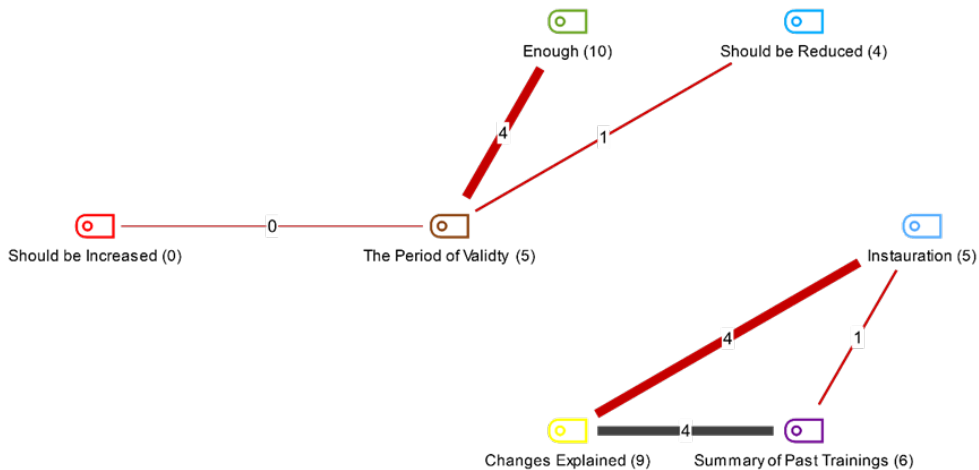
Opinions of the participants were taken about how the trainings for safety and security should be carried out. General data obtained « How should it be? It is expressed with various codes under the theme ». The thickness of the arrows accessing the codes from the theme is directly proportional to the intensity of the answers given. The more answers given under that code, the thicker the arrows. According to the model, it is thought that it will be more efficient to conduct the trainings face-to-face, interactively and with case studies. " How should it be? » theme and under codes « If you were a training planner, what do you think you would never do/definitely would do? » is also used for the question.

Interview 1 « Instead of conveying the boring procedures in the trainings, creating training modules with videos that touch the emotions will contribute to the memorability of the trainings. With the expression », he emphasized the interactivity.

Interview 5 « Since the trainings are both theoretical and practical, they progress very well. In addition, since the events experienced are exemplified, we can go through the mistakes and the right ones again. », statement drew attention to the narration of case studies.

Interview 7 » I would exclude operational training from the scope of online training. If I were an experienced educator, I would prefer to touch people in their classroom training with my experiences », as in interview 5, it emphasizes the importance of using case studies in education.

Interview 14 « I would never do security training remotely on a computer. If possible, I would like to do one-on-one and face-to-face training with all the trainees." He emphasized the importance of face-to-face training.



### Model 2. Refresher Training Content and Duration

The participants were asked to evaluate the time taken until the general education and refresher education, and they were also asked to give basic information about the content of the refresher education. In the model created for this, it was concluded that the duration of the interview participants from general education to refresher education was sufficient. In addition, it has been pointed out that the refresher trainings are in the form of a summary of the general trainings and the innovation, if any, is a training in which these innovations are explained.

No opinion was expressed regarding the prolongation of the period between general training and refresher training, and only one participant stated that «I would ensure that the trainings were not overwhelming for a short time (Interview 9)», in order to shorten the duration of the training, rather than the time in between.



Figure 1. Code Cloud

The code cloud frequency value is set to 3. That is, the codes included in the code cloud must be used at least 3 times during the interviews. In the resulting code cloud, the highlights of the interviews are seen in the center of the cloud, larger and thicker than the other codes. In the related study, it can be concluded that the trainings for safety and security contain general information, even if they are in different business lines. In addition, it can be concluded that transferring case studies to students will increase the efficiency of education.

## CONCLUSION

In the study, the opinions of industry professionals working in different business lines within the aviation sector, who received training on safety and security, regarding the content of the trainings are included. In the aviation sector, where international standards for safety and security are established, the training contents must be applied in accordance with international standards. It is known that the general education, training and application forms differ according to the countries. In this study, it is aimed to reveal whether this difference also exists in aviation sector trainings with international standards. According to the findings, it was concluded that international education practices and safety and security education practices in Turkey progressed in parallel with each other.

All of the research participants are full-time employees, and most of them have been active in the sector for a long time. Stating that the content of the refresher training is in the form of a summary of the general training, the industry professionals stated that the trainings should be interactive and that more case studies should be included. In addition, while there are professionals who express their opinion that providing training in the status of trainers by active employees in the sector will increase efficiency, there are also professionals who argue that training with trainers from different institutions, completely outside the institution, will be more efficient.

While emphasizing the adequacy of the training periods, it was emphasized that it would be more appropriate to conduct the refresher trainings through online platforms without disrupting the general operation. In the transfer of innovations, it was emphasized that face-to-face education would be healthier.

## REFERENCES

- Akkaşoğlu, S. & Akyol, C., 2022. Salgın Hastalık Kaynaklı Krizlerin Turizm Endüstrisine Etkileri; Covid-19 Özelinde Bir Araştırma. Doğuş Üniversitesi Dergisi, Issue 23 (Covid-19 Özel Sayısı), pp. 121-134.
- Akkaşoğlu, S. & Akyol, C., 2022. Salgın Hastalık Kaynaklı Krizlerin Turizm Endüstrisine Etkileri; Covid-19 Özelinde Bir Araştırma. Doğuş Üniversitesi Dergisi, Issue 23 (Covid-19 Özel Sayısı), pp. 121-134.
- Alayoğlu, N., 2001. Çalışma Hayatında Esneklik (Çalışma Modelleri). Çerçeve Trend, pp. 96-106.
- Anon., 2003. İŞ KANUNU. basım yeri bilinmiyor:Resmi Gazete.
- Bağcı, E., 2017. Terör Olaylarının Türkiye Turizm Sektörüne Etkisi. Yüzüncü Yıl Üniversitesi Sosyal Bilimler Enstitüsü Dergisi, 1(Özel Sayı-3), pp. 1-9.
- Bakanlığı, T. K., 2018. On Birinci Kalkınma Planı (2019-2023) Turizm Özel İhtisas Komisyonu Raporu, Ankara: T.C. Kalkınma Bakanlığı.
- Bakanlığı, T. U. v. A., 2021. Veri Seti, Ankara: T.C. Ulaştırma ve Altyapı Bakanlığı.
- Bank, T. W., 2019. Sierra Leone Tourism Statistics 1995-2019, basım yeri bilinmiyor: The World Bank.
- Biron, M. & Veldhoven, M. V., 2016. When control becomes a liability rather than an asset: Comparing home and office days among part-time teleworkers. Journal of Organizational Behavior, November, 8(37), pp. 1317-1337.
- Brusakova, O. V., Iemets, L. O., Shulha, A. M. & Kolotik, A. S., 2020. Legal and Organizational-Technical Assurances of Aviation Security. Amazonia Investiga, May, 9(29), pp. 542-549.
- Çetingüç, M., 2016. Havacılık ve Uzak Psikolojisi. Ankara: Nobel Akademik Yayıncılık.
- Demir, F. & Gerşil, G., 2008. Çalışma Hayatında Esneklik Ve Türk Hukukunda Esnek Çalışma. Kocaeli Üniversitesi Sosyal Bilimler Enstitüsü Dergisi, pp. 68-89.
- Doğrul, B. Ş. & Tekeli, S., 2010. İş-Yaşam Dengesinin Sağlanmasında Esnek Çalışma. Sosyal ve Beşeri Bilimler Dergisi, 2(2), pp. 11-18.
- Eryiğit, S., 2000. Esnek Üretim Esnek Organizasyon Esnek Çalışma. Türk Ağır Sanayii ve Hizmet Sektörü Kamu İşverenleri Sendikası Kamu-İş Dergi ve Yayınları, 5(4), pp. 1-16.
- Hertel, G., Geisterb, S. & Konradt, U., 2005. Managing virtual teams: A review of current empirical research. Human Resource Management Review, March, 15(1), pp. 69-95.

- HSGM, 2022. Haberler. [Çevrimiçi]  
Available at: <https://hsgm.saglik.gov.tr/tr/haberler/el-ayak-ve-agiz-hastaligi.html>  
[Erişildi: 30 Ekim 2022].
- IATA, 2020. Security Management System Manual. basım yeri bilinmiyor:IATA.
- IATA, 2022. Aviation Security. [Çevrimiçi]  
Available at: <https://www.iata.org/en/programs/security/>
- ICAO, 2013. Safety Management Manuel. Third Edition dü. basım yeri bilinmiyor:International Civil Aviation Organization.
- ICAO, 2022. Aviation Security and Facilitation. [Çevrimiçi]  
Available at: <https://www.icao.int/security/Pages/default.aspx>
- International, A. S. S. A., 2022. Vision and Objectives. [Çevrimiçi]  
Available at: <https://assa-i.org/about-assa-i.php?page=vision-and-objectives>
- Karadeniz, E., Beyaz, F. S., Ünlübulduk, S. N. & Kayhan, E., 2020. Covid-19 Salgınının Turizm Sektörüne Etkilerinin ve Uygulanan Stratejilerin Değerlendirilmesi: Otel Yöneticileri Üzerinde Bir Araştırma. Türk Turizm Araştırmaları Dergisi, 4(4), pp. 3116-3136.
- Karamustafa, K. & Örnek, N., 2021. COVID-19 Salgını ve Zenginleştirilmiş Turizm Ürünü: Turizm Çiçeği Önerisi. Journal of Tourism and Gastronomy Studies, 9(3), pp. 1639-1660.
- Khalilzadeh, J., 2020. THE FUTURE OF THE GLOBAL TOURISM SYSTEM POST COVID-19. ECU School of Hospitality Leadership, pp. 2-7.
- Konfederasyonu, T. İ. S., 1999. Çalışma Hayatında Esneklik. Ankara: TİSK.
- Kornecki, A. J. & Liu, M., 2013. Fault Tree Analysis for Safety/Security Verification in Aviation Software. Electronics, 2(1), pp. 41-56.
- McLuhan, M. & Fiore, Q., 1967. The Medium is The Massage. Corte Madera: Gingko Press.
- Meçik, O., 2021. Gelecek Ne Getirecek? Türkiye'de İşgücü Piyasası Dinamikleri. %1 içindeGelecekte Ekonomi. İstanbul: İstanbul Kültür Üniversitesi Yayınları, pp. 561-585.
- Miziuk, V., 2014. THE GLOBAL EXPERIENCE GAINED IN THE AREA OF AVIATION SECURITY FINANCING. Taylor & Francis Aviaton, 18(2), pp. 91-93.
- Nakanishi, Y., 2008. Introduction . %1 içindeAviation Security Managemenet: Three Volumes. Westport, CT: Praeger Security International, pp. 257-265.
- Pettersen, K. A. & Bjørnskau, T., 2015. Organizational contradictions between safety and security – Perceived challenges and ways of integrating critical infrastructure protection in civil aviation. Safety Science, pp. 167-177.
- Settles, G., Keane, B., Anderson, B. & Gatto, J., 2003. Shock waves in aviation security and safety. Shock Waves, Cilt 12, pp. 267-275.
- SGK, 2022. Ocak-2022 Türkiye SGK Sigortalı İstatistikleri, basım yeri bilinmiyor: SGK.
- TÜİK, 2020. Turizm İstatistikleri, IV.Çeyrek: Ekim-Aralık ve Yıllık, 2020, Ankara: TÜİK.
- TÜRSAB, 2019. Turizm gelirleri, Ankara: TÜRSAB.
- Yıldız, Z., 2011. TURİZMİN SEKTÖRÜNÜN GELİŞİMİ VE İSTİHDAM ÜZERİNDEKİ ETKİSİ. Süleyman Demirel Üniversitesi Vizyoner Dergisi, 3(5), pp. 54-71.