



Collegiate Aviation Student Perceptions of Racial Influences in Aviation Education

EMBRY-RIDDLE
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Abstract

The U.S. aviation industry has grown significantly in the last several decades, but existing literature identifies a gap between progress for the industry and representation of minorities. According to the Bureau of Labor Statistics in 2019, out of the 141,000 persons employed in the U.S. as either “aircraft pilots” or “flight engineers”, 2.6% were Black, 3.4% were Asian, and 2.2% were Hispanic or Latino, while 93.7% were White (BLS, 2020). This exploratory study examines the perceptions of collegiate aviation students, who represent the next generation of the aviation industry, and the impact race may have had on their choice to pursue an aeronautics or aeronautical degree. Through interviews with students currently enrolled in aviation career degree programs, this case study provides insight into their perceptions of how race, if at all, plays a role in aviation education.

Introduction & Background

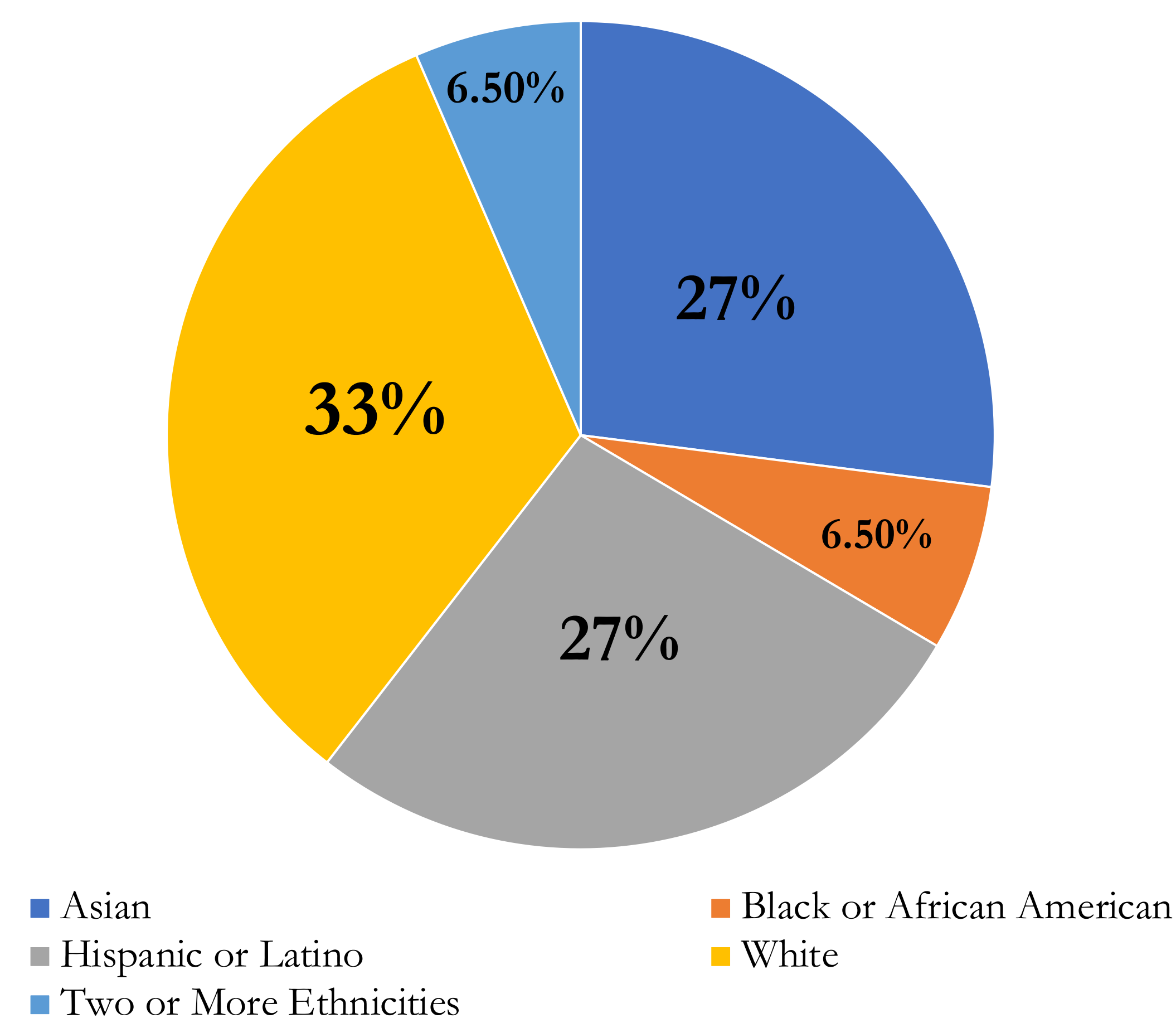
- The U.S. aviation industry historically has not had a racially diverse workforce (Ison et al., 2016).
- When compared to the diversity of the overall U.S. workforce, aviation is lagging significantly behind.
- From 2000 to 2016, total college enrollment rates increased for Black students from 31% to 36%, for Hispanic students from 22% to 39%, and for White students from 39% to 42% (de Brey et al., 2019)
- As of October 2021, out of the 6,926 undergraduate students enrolled at Embry-Riddle Aeronautical University’s Daytona Beach campus, 40% are minorities (ERAU, 2021).
- This is a significant difference when compared to the 8.2% of total minorities employed as “pilots” or “flight engineers” in the U.S. aviation industry.

Methodology

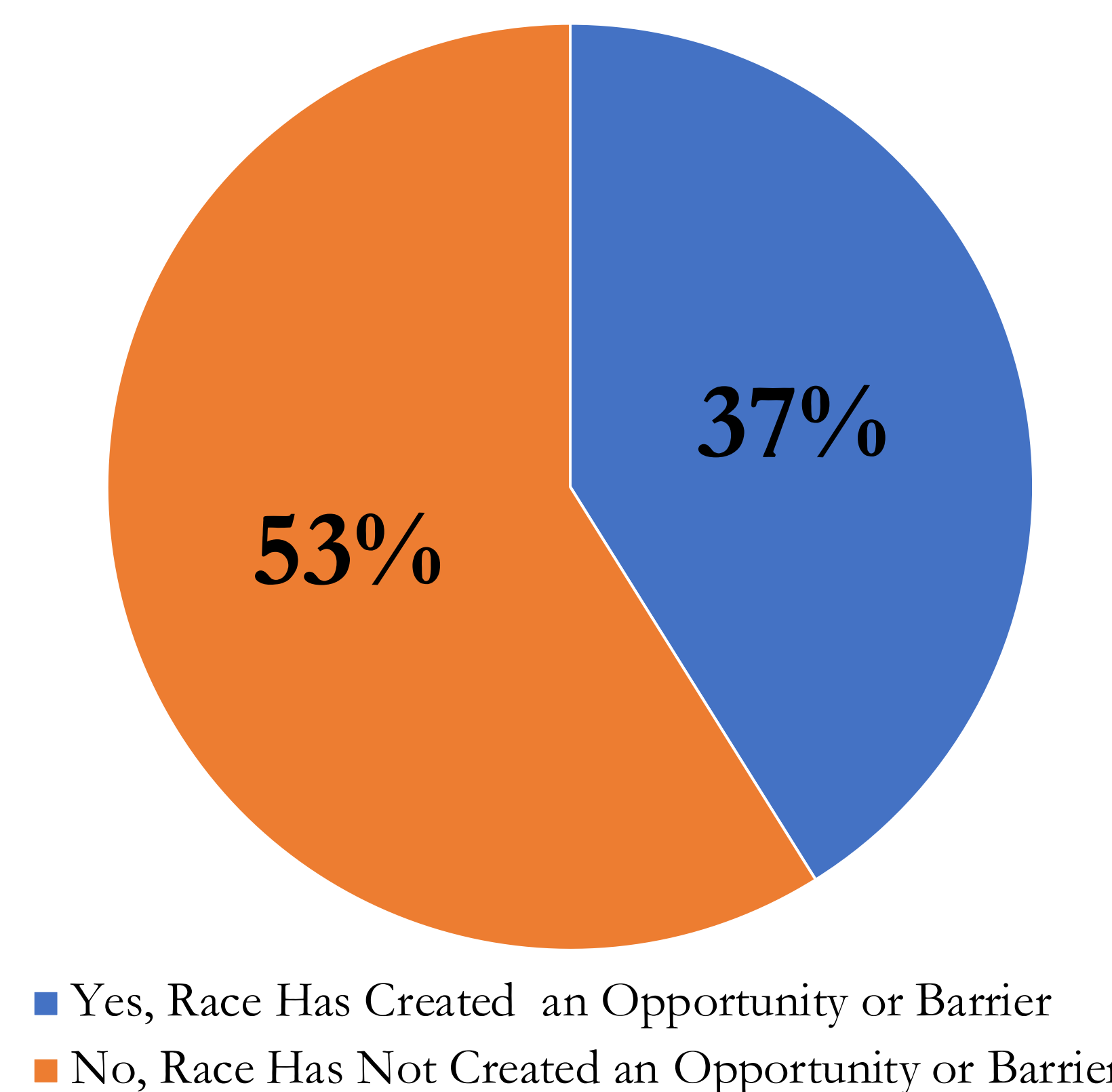
- Participation in this study was open to Embry-Riddle Daytona undergraduate students enrolled in either aeronautical science or aeronautics degree programs, or instructor pilots (IPs) currently employed by the university and have been enrolled in a collegiate aviation program within the previous three years.

Results

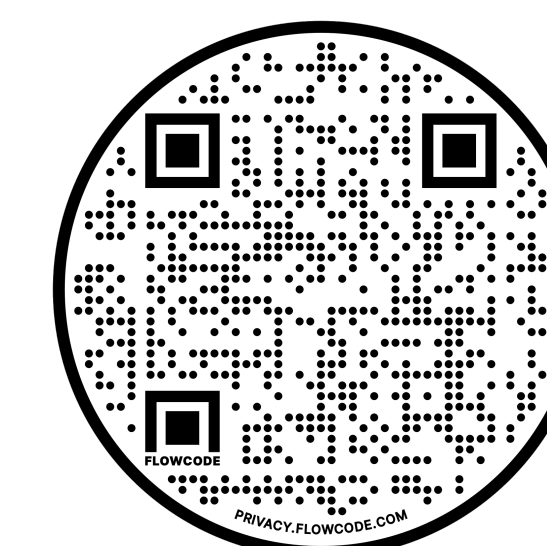
Participant Demographics



Perception of Race as a Barrier or Opportunity



Scan for Complete Results:



Conclusions & Future Research

- While most participants did not perceive race to be a barrier in aviation education, many participants identified examples of where racial barriers have played a role, in some form, during their aviation career.
- Several participants described the U.S. aviation industry’s lack of diversity as an obstacle after beginning their collegiate aviation program.
- Further research must be conducted to gain a better understanding of the perceptions of students in other collegiate aviation programs in the U.S.
- The authors hope this study lays the groundwork for future research and inspires others to pursue their own research in this area as we work towards a more racially diverse aviation industry.

References

Bureau of Labor Statistics (BLS). (2020). *Labor force characteristics by race and ethnicity, 2019*.

De Brey, C., Musu, L., McFarland, J., Wilkinson-Flicker, S., Diliberti, M., Zhang, A., Branstetter, C., & Wang, X. (2019). *Status and Trends in the Education of Racial and Ethnic Groups 2018* (NCES 2019-038). U.S. Department of Education. Washington, DC: National Center for Education Statistics.

Embry-Riddle Aeronautical University (ERAU). (2021). *Enrollment Fact Sheet: Fall 2021*.

Ison, D.C., Herron, R., & Weiland, L. (2016). Two decades of progress for minorities in aviation. *Journal of Aviation Technology and Engineering*, 6(1).