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Perspectives of Women Aviation Education Educators on Gender Disparity

Maura Gina D. Ramoso

National Aviation Academy of the Philippines (formerly Philippine State College of Aeronautics), Philippines

Ruth A. Ortega-Dela Cruz

Institute for Governance and Rural Development, College of Public Affairs and Development, University of the Philippines Los Baños, Philippines

The aviation industry has long been regarded as a male-dominated field, with women facing various barriers to entering and advancing within the profession. In the Philippines, the Philippine State College of Aeronautics (PhilSCA) stands as a prominent institution for aviation education. This study explores the perspectives of women aviation education educators on gender disparity in the college, seeking to understand the challenges they encounter and strategies for overcoming them. The study employed a quantitative research method, including a structured survey with women educators. Results indicate generally positive perceptions of gender representation, with low levels of reported discrimination or bias. While participants noted improvements in inclusivity, concerns remain about underrepresentation in leadership and subtle gender biases. Respondents strongly supported institutional strategies such as policy reform, mentorship programs, access to professional development, and gender equality training. The findings offer practical recommendations for enhancing gender-inclusive policies and support systems. This study contributes to ongoing efforts to advance inclusive practices in male-dominated academic fields such as aviation education.

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Introduction

The aviation industry is a complex and technologically advanced sector that plays a vital role in global connectivity, economic growth, and social development. It contributes over \$660 billion to the global GDP and supports approximately 65 million jobs worldwide, facilitating international trade, tourism, and investment (IATA, 2019; Lenaerts et al., 2021).

In the Philippines, aviation holds particular significance due to the country's archipelagic geography, comprising over 7,000 islands. For many regions, air transport is not only the most efficient but sometimes the only viable means of connecting people, goods, and services. The sector supports millions of livelihoods, drives tourism, a major contributor to national GDP, and expands access to education, healthcare, and business opportunities, especially in remote areas (Boquet, 2017; Ramoso & Cruz, 2025). Major airports such as Ninoy Aquino International Airport (NAIA), Mactan-Cebu International Airport, and other regional hubs serve as critical nodes for economic activity and mobility.

Despite its economic importance and technological sophistication, the aviation industry continues to struggle with significant gender disparities. Women remain underrepresented, particularly in technical and leadership roles, including pilots, engineers, and aviation managers (de Andreis, 2023; Marete & Wang, 2024). This imbalance goes beyond mere numbers; it reflects deep-seated systemic barriers that limit women's access to and advancement within the field (Antloga et al., 2025; Sobieralski & Hubbard, 2019). The Philippines is no exception. Although global and local efforts have sought to increase female participation in aviation, women still constitute a small minority of the industry's workforce (Ferla & Graham, 2019). This underrepresentation is especially pronounced in educational institutions that prepare students for aviation careers (Marete et al., 2022).

While the Philippines has made progress in empowering women across many sectors, the aviation industry has been slower to adapt. Cultural and societal norms, along with entrenched stereotypes, often discourage women from entering technical professions such as aviation (Clark et al., 2015; Gorlin & Bridges, 2021). Consequently, fewer women enroll in aviation programs, and those who do frequently encounter gender-based discrimination or exclusion within both academic and professional environments (Casebolt, 2023; Marintseva et al., 2022). Female educators in aviation are not exempt from these challenges, facing their own set of gender-related obstacles in their professional journeys.

Women educators play a critical role in aviation education not only as instructors, but also as mentors and role models for future aviation professionals, particularly female students. Yet their voices remain underrepresented in research. In a field where technical expertise is paramount, the presence of women educators is essential to fostering a more inclusive and diverse learning environment. Their experiences and insights can illuminate the structural barriers that persist within aviation education and offer pathways toward more equitable practices.

Despite ongoing challenges, there are encouraging signs of progress. Globally, the International Civil Aviation Organization (ICAO) has launched initiatives to promote gender

equality, aiming to increase women's participation in both aviation workplaces and educational institutions (ICAO, 2020). In the Philippines, government bodies and non-government organizations have introduced programs to support women in technical fields, working to dismantle barriers in traditionally male-dominated industries (David et al., 2018).

This study emerges from the need to better understand the experiences of women educators in aviation programs at one of the country's leading institutions for aviation training and education. By focusing on their perspectives, the research aims to uncover the unique challenges they face within this specialized academic environment. It also seeks to examine how female educators help shape the future of aviation education in the Philippines. Ultimately, the findings may inform more inclusive policies and practices, not only within the institution studied but also across similar academic settings striving for greater gender equity in aviation.

While gender disparity in aviation is well documented globally, there is limited research on the specific experiences of female educators in aviation education in the Philippines. Women in the aviation sector have historically been underrepresented, and this is even more evident in educational settings. This study addresses a gap in the literature by examining how female educators in aviation education perceive and experience gender disparity at the Philippine State College of Aeronautics (PhilSCA). Thus, this study seeks to answer the major research question: How do women aviation education educators perceive gender disparity within an aviation education institution? Specifically, this study aims to: (i) determine the perspectives of women aviation education educators on gender disparity; (ii) identify the challenges that female educators face in the aviation education field; and (iii) assess the strategies used by female educators to overcome gender-based challenges.

Understanding the perspectives of women educators will not only highlight the current state of gender disparity within aviation programs but also suggest ways to advance gender equality in this important field. Given that the aviation industry is projected to grow substantially in the coming decades, promoting diversity and inclusion within educational institutions is critical to ensuring a more equitable and representative workforce for the future.

The significance of this study extends beyond the aviation education sector in the Philippines. By addressing gender disparity, it directly contributes to achieving several Sustainable Development Goals, particularly SDG 5 (Gender Equality), SDG 4 (Quality Education), SDG 8 (Decent Work and Economic Growth), SDG 10 (Reduced Inequality), and SDG 17 (Partnerships for the Goals). This study emphasizes the importance of creating an inclusive educational environment where all individuals, regardless of gender, can access quality education, contribute to the economy, and benefit from equal professional opportunities. In doing so, it paves the way for a more inclusive, diverse, and sustainable aviation industry that reflects the values of global development agendas.

Theoretical Framework

This study draws upon the following theoretical frameworks to understand the experiences of women aviation education educators and the gender disparities within PhilSCA.

Social Cognitive Theory (Bandura, 1986) provides a lens for examining how individuals learn and develop behaviors through observation, modeling, and reinforcement. In the context of this study, it helps understand how societal stereotypes and the lack of female role models in aviation can influence women's career aspirations and choices. Likewise, the Critical Feminist Theory (Marshall, 1988) examines how power relations and social structures contribute to gender inequality. This framework provides a critical perspective on the institutional and systemic barriers that women face in aviation education and the broader industry. By integrating these theoretical frameworks, the study aims to provide a comprehensive understanding of the complex factors contributing to gender disparity in aviation education at PhilSCA.

Materials and Methods

Research Design

This study primarily employed a quantitative approach using a descriptive survey research design to examine perceptions of gender representation and equity within an aviation education institution. Survey research is appropriate for describing existing conditions and systematically gathering data on participants' attitudes and experiences (Ramoso & Ortega-Dela Cruz, 2019). Quantitative data were collected through structured, closed-ended questionnaire items. To complement these findings, open-ended questions were included to gather qualitative insights, providing contextual explanations and a deeper understanding of respondents' perspectives (Cruz, 2020; Ortega-Dela Cruz, 2020).

Research Participants

Purposive sampling was used to select the respondents for this study. A total of 31 female faculty members participated by completing the online survey. Ethical standards were upheld throughout the study, including informed consent, confidentiality, and voluntary participation. Participants were fully briefed on the study's purpose and provided written consent. Their identities were anonymized, and all data were kept confidential. Participation was voluntary, with the option to withdraw at any time without consequence.

The demographic data reflects a relatively balanced and experienced group of faculty members. The largest age group among the respondents is 25–34 years old (10 respondents, 32.3%), followed by those aged 35–44 (8 respondents, 25.8%). In terms of academic qualifications, the majority hold postgraduate degrees: 20 respondents (64.5%) hold a Master's degree and 6 (19.3%) hold a Doctorate. The most common academic rank is Instructor (16 respondents, 51.6%), followed by Associate Professors (8, 25.8%) and Assistant Professors (7, 22.6%), indicating a diverse mix of early- and mid-career faculty members with varying academic responsibilities and levels of professional engagement. Regarding their teaching assignments, the respondents were primarily involved in teaching both general education and technical courses within the Aircraft Maintenance Technology program, providing perspectives that reflect both foundational and specialized areas of aviation education. Regarding teaching experience in aviation education, 12 respondents (38.7%) reported more than 15 years of experience, while only 1 respondent (3.2%) had less than 1 year of teaching experience,

suggesting that the study largely captured the views of seasoned educators with substantial experience in aviation education.

Instrumentation

A structured questionnaire was designed to gather comprehensive data on participants' experiences, perceptions, challenges, and strategies related to gender disparity in aviation education. The instrument included both closed- and open-ended questions and was organized into five main sections. The first section collected demographic information such as age and years of experience in aviation education. The second section focused on perceptions of gender disparity, featuring Likert-scale items assessing views on gender equality and biases within the field. The third section explored the challenges participants faced, using a combination of multiple-choice and open-ended questions to identify barriers to career advancement. The fourth section addressed the strategies participants employed to overcome these challenges, incorporating both scaled items and open-ended responses. Finally, the fifth section invited participants to offer recommendations for improving gender equality in aviation education through open-ended questions. The survey questionnaire was distributed using Google Forms.

To ensure the validity and reliability of the questionnaire, a two-step process was employed. First, content validity was established through expert review: a panel of professionals in aviation education, gender studies, and educational research evaluated the questionnaire to ensure clarity, relevance, and comprehensiveness of the items. Feedback from these experts was incorporated to refine the wording and structure of questions. Second, a pilot test was conducted with a small sample of participants similar to the study population. Based on the pilot results, minor adjustments were made to enhance clarity and flow. To assess internal consistency reliability, Cronbach's alpha was calculated for the Likert-scale items, with a threshold of 0.70 considered acceptable. This systematic approach helped confirm that the questionnaire was both a valid and reliable instrument for capturing meaningful data relevant to the study's objectives.

Data Analysis

Quantitative data derived from the closed-ended questions were analyzed using descriptive statistics, including median, frequency, and percentage, to identify patterns and trends in the respondents' perceptions. Meanwhile, qualitative data from the open-ended questions were transcribed verbatim and reviewed in their entirety. The responses were then organized thematically to identify recurring ideas and patterns related to participants' experiences and perspectives on gender equity in aviation education. Representative quotations were selected for inclusion in the discussion because they clearly illustrated the emerging themes or provided meaningful examples that enriched the interpretation of the quantitative findings. Where necessary, minor grammatical and typographical corrections were made to the quoted responses to improve readability while preserving the respondents' original intent and meaning.

Results and Discussions

Perspectives of Women Aviation Education Educators on Gender Disparity in PhilSCA

The data presented in Table 1 reflect respondents' perceptions of the current state of gender representation and equity within the aviation education institution. Overall, all survey items received a verbal interpretation of "Agree," indicating generally positive perceptions of gender equity and inclusion. However, variations in the median scores and standard deviations reveal important nuances that warrant further discussion.

Table 1

Perspectives of Women Aviation Education Educators on Gender Disparity

Item Number	Median	Verbal Interpretation	SD
Current State of Gender Representation in your institution			
1. Women are adequately represented in aviation student body.	3.29	Agree	0.59
2. Women are adequately represented among aviation faculty.	3.26	Agree	0.63
3. Women are adequately represented in leadership positions within aviation programs.	3.26	Agree	0.73
4. There is a noticeable gender disparity in the aviation education department.	2.81	Agree	0.79
5. There has been significant progress in gender representation in aviation programs in recent years.	3.32	Agree	0.48
Perceptions of Gender Disparity in Aviation Education			
6. Women in aviation education are treated equally with their male counterparts in terms of professional opportunities and resources.	3.32	Agree	0.48
7. Gender biases (e.g., assumptions about capabilities based on gender) affect the teaching and learning environment.	2.58	Agree	0.81
8. There are adequate female role models and mentors in aviation education.	3.23	Agree	0.56
9. The leadership and decision-making bodies include sufficient representation of women in positions of authority.	3.06	Agree	0.63
10. There is an adequate awareness or understanding of gender issues within the teaching staff.	3.13	Agree	0.50

Item 5, "There has been significant progress in gender representation in aviation programs in recent years" (Median=3.32, SD=0.48), received the highest median score, indicating strong consensus that meaningful improvements have been made in promoting gender diversity in aviation education. Similarly, Item 6, "Women in aviation education are treated equally with their male counterparts in terms of professional opportunities and resources"

(Median=3.32, SD=0.48), indicates that respondents generally perceive the institution as providing equitable opportunities and resources regardless of gender. The relatively low standard deviations for both items further demonstrate consistency in these positive perceptions among participants. Nevertheless, it is important to distinguish between perceived equality and actual equity. While respondents believe that opportunities are generally available to all, equal treatment does not necessarily guarantee equitable outcomes, particularly in fields where historical and structural disparities continue to influence participation and advancement.

Item 1, "Women are adequately represented in the aviation student body" (Median = 3.29, SD = 0.59), indicates that female student representation is considered satisfactory. Nonetheless, this perception contrasts with global trends, where women still make up a minority in many aviation programs.

Likewise, Item 1, "Women are adequately represented in the aviation student body" (Median=3.29, SD=0.59), suggests that respondents perceive female student representation as generally satisfactory within their institution. This finding may reflect recent institutional efforts to encourage women's participation in aviation programs. However, this perception should be interpreted within the broader context of the aviation industry, where women continue to comprise a relatively small proportion of students and professionals in many aviation disciplines. Consequently, positive institutional perceptions should not obscure the broader challenges associated with achieving gender balance across the sector.

In contrast, the lower-rated items reveal areas where respondents recognize that gender-related challenges persist. Item 7, "Gender biases (e.g., assumptions about capabilities based on gender) affect the teaching and learning environment" (Median=2.58, SD=0.81), received the lowest median score, suggesting that while overt gender bias may not be widely perceived, respondents acknowledge that implicit biases and stereotypes continue to influence educational experiences. Similarly, Item 4, "There is a noticeable gender disparity in the aviation education department" (Median=2.81, SD=0.79), indicates that respondents still perceive gender imbalance in certain aspects of the academic environment despite overall progress. Furthermore, Item 9, "The leadership and decision-making bodies include sufficient representation of women in positions of authority" (Median=3.06, SD=0.63), points to continuing concerns regarding women's representation in leadership roles. This finding is reinforced by several respondents' qualitative comments, with three participants specifically noting that "women face inequality when it comes to leadership and authority," suggesting that leadership remains an area where gender equity has yet to be fully realized.

An important finding emerging from these results is the coexistence of generally positive perceptions of gender equity with strong support for continued gender-equity initiatives. Although respondents reported relatively low levels of overt discrimination, they consistently endorsed strategies that promote gender inclusion and equal opportunities. This suggests that the absence of explicit discriminatory experiences does not necessarily indicate that gender equity has been fully achieved. Instead, respondents recognize that fostering an inclusive educational environment requires sustained institutional commitment through proactive, rather than purely reactive, measures. Their responses reflect an understanding that continued efforts are necessary

to preserve existing progress while addressing subtle or systemic barriers that may influence career advancement, leadership representation, and long-term participation in aviation education.

Accordingly, the findings underscore the importance of institutional initiatives such as structured mentorship programs, equitable access to leadership and professional development opportunities, gender-awareness and unconscious bias training, and policies that actively promote diversity, equity, and inclusion. These preventive and developmental measures not only help mitigate less visible forms of bias that may not be readily captured through survey responses but also reinforce an organizational culture that values fairness, inclusivity, and equal opportunity. Embedding such practices into institutional policies and everyday academic activities can help sustain positive perceptions of gender equity while strengthening pathways for the recruitment, retention, advancement, and leadership of women in aviation education.

These findings are consistent with previous studies documenting persistent structural and cultural barriers in aviation education, particularly regarding women's representation in leadership positions and the influence of implicit gender biases (Light, 2024; Morrison, 2021). While respondents acknowledged meaningful institutional progress and generally favorable conditions for gender equity, their strong endorsement of continued gender-equity initiatives demonstrates an awareness that lasting inclusion requires ongoing institutional support and continuous improvement. Therefore, gender equity should be viewed not as a one-time accomplishment but as an evolving organizational commitment that requires regular assessment, policy refinement, and sustained investment in inclusive practices.

Challenges and Barriers that Women Educators Face in the Aviation Education Field

The data presented in Table 2 suggest that female educators in the aviation program generally disagree with statements indicating gender-based challenges, with median scores ranging from 2.00 to 2.23. These responses imply a perceived sense of equity within their professional environment. For example, participants expressed disagreement with experiencing barriers in career advancement (Item 11, Median=2.23), classroom credibility due to gender stereotypes (Item 12, Median=2.03), and discrimination in professional recognition (Item 13, Median=2.03). These self-reported data may suggest that overt gender-based obstacles are not widely experienced by women educators in this specific institutional context, contrasting with existing literature highlighting systemic inequities in male-dominated fields such as aviation and STEM education (de Andreis, 2023; Sobieralski & Hubbard, 2019).

Table 2

Challenges Faced by Women Aviation Educators

Item Number	Median	Verbal Interpretation	SD
Challenges Faced by Female Educators			
11. I experience lack of career advancement opportunities compared to male colleagues.	2.23	Disagree	0.84

12. I face gender stereotypes that affect my credibility or authority in the classroom.	2.03	Disagree	0.71
13. I experience discrimination or bias in receiving professional recognition (e.g., awards, promotions, leadership roles).	2.03	Disagree	0.80
14. I face unequal distribution of responsibilities or teaching loads due to gender.	2.00	Disagree	0.83
15. I face challenges related to work-life balance due to gender expectations (e.g., family obligations, societal expectations).	2.19	Disagree	0.75
16. I face lack of gender-sensitive policies or initiatives within the institution.	2.10	Disagree	0.79
17. I experience being treated as less competent than male colleagues due to the perception that women are not as technically skilled in aviation subjects.	2.13	Disagree	0.67
18. I have fewer opportunities for networking, collaborations, or visibility in professional events compared to male colleagues.	2.00	Disagree	0.68

From a Social Cognitive Theory (SCT) perspective, these findings reflect the role of observational learning, self-efficacy, and environmental reinforcement in shaping the perceptions of female educators. According to SCT, individuals interpret their experiences and model their behavior based on perceived norms and outcomes within their environment. The perceived equity in the institution may contribute to higher self-efficacy among female educators, reducing their likelihood of reporting discrimination if they do not directly observe or experience it. However, SCT also recognizes the potential for individuals to adapt to or rationalize their environment, including underrecognition of systemic issues, especially when these issues are normalized or subtly embedded in institutional culture.

In contrast, Critical Feminist Theory calls for a more critical examination of power structures, prompting us to question whose experiences are considered “normative” and which forms of discrimination are rendered invisible. Although the data reflect low levels of reported gender-based challenges, this does not necessarily indicate the absence of gender inequality. Critical Feminist Theory posits that systems of patriarchy and institutional bias often operate through subtle, structural mechanisms that may be internalized or go unacknowledged by those affected (Galsanjigmed & Sekiguchi, 2023). For example, normalized gender roles, such as expectations around family responsibilities (Item 15, Median=2.19), and the lack of gender-sensitive institutional policies (Item 16, Median=2.10), may still reinforce inequities, even when overt discrimination is not perceived.

Moreover, the low standard deviations (ranging from 0.67 to 0.83) suggest a general consensus among respondents. However, Critical Feminist Theory reminds us that consensus does not equate to equity. Silence or lack of dissent can often signal internalized oppression or a

culture of acceptance, rather than genuine parity. Additionally, as Light (2024) and Morrison (2021) argue, gender biases often manifest in covert ways such as informal exclusion from networks, underrepresentation in leadership, or diminished visibility in technical fields, which may be underreported or not consciously recognized by those affected.

Strategies Used by Women Aviation Educators to Overcome Gender-Based Challenges

The data (Table 3) provide strong support for a broad range of strategies to address gender disparity in aviation education. The highest-rated items, with a median score of 3.61 ("Strongly Agree"), include the need for gender awareness training for male faculty and staff (Item 24), policy reviews to ensure gender neutrality (Item 28), and increased visibility of women's achievements in aviation (Item 30).

Table 3

Strategies Used by Women Aviation Educators to Overcome Gender-Based Challenges

Item Number	Median	Verbal Interpretation	SD
Strategies for Overcoming Gender Disparity			
19. Educational institutions should provide mentorship programs for female educators to help improve gender equality in aviation education.	3.48	Agree	0.51
20. Educational institutions should promote gender-sensitive curriculum designs to enhance inclusivity in the classroom and address gender disparities.	3.42	Agree	0.62
21. There should be more female representation in leadership and decision-making roles.	3.23	Agree	0.72
22. Educational institutions should create a more supportive network for female educators to help combat gender inequality.	3.39	Agree	0.56
23. Educational institutions should provide equal access to professional development opportunities (e.g., workshops, conferences) for all educators, regardless of gender.	3.58	Strongly Agree	0.50
24. Educational institutions should provide gender awareness training for male faculty members and staff to help address biases and improve gender equality.	3.61	Strongly Agree	0.50
25. Institutional policies should prioritize gender diversity and inclusion in hiring and promotion practices.	3.42	Agree	0.56

26. Educational institutions should increase opportunities for female faculty members to participate in leadership or administrative roles to address the gender gap.	3.52	Strongly Agree	0.57
27. Educational institutions should partner with aviation organizations to create more opportunities for women in the field.	3.55	Strongly Agree	0.57
28. Educational institutions should review and revise institutional policies and procedures to ensure they are gender-neutral and promote inclusivity.	3.61	Strongly Agree	0.50
29. Educational institutions should offer scholarships or financial aid specifically for women pursuing aviation degrees.	3.52	Strongly Agree	0.57
30. Educational institutions should create a more visible presence of women in aviation through showcasing their achievements and contributions.	3.61	Strongly Agree	0.50
31. Gender equality training should be mandatory for all faculty and staff within aviation programs.	3.58	Strongly Agree	0.56
32. Educational institutions should establish a gender equality committee to monitor progress and implement initiatives to promote inclusivity.	3.58	Strongly Agree	0.50

Participants emphasized the importance of structural and cultural transformation to support gender equity, as reflected in several powerful statements:

“Create a policy and put that in effect that will address any biases in the educational system and gender equality.”-Respondent 04

“Establish women-focused aviation organizations that offer mentorship and professional development.”-Respondent 15

“More female role models.”-Respondent 22

“Highlight successful women in aviation through guest lectures, mentorship programs, and media campaigns.” – Respondent 31

“Actively promote the contributions of women in aviation history and contemporary practice.”-Respondent 18

“Establish formal mentorship programs and invite successful women in aviation to share their experiences.”-Respondent 10

“Break misconceptions, diversify women’s roles, and promote their participation in technical and leadership positions.”-Respondent 30

These responses clearly echo the core tenets of Critical Feminist Theory, which emphasizes that gender inequality is embedded within institutional and cultural structures, not simply a matter of individual experiences or attitudes. The call for policy reform, increased visibility, and mentorship opportunities reflects an understanding that systemic change is necessary to disrupt the gendered power dynamics that have historically marginalized women in male-dominated fields like aviation (Morrison, 2021; Gonzalo et al., 2024). The emphasis on

representation and role modeling challenges patriarchal norms by redefining who is visible and celebrated within aviation education and leadership.

From a Social Cognitive Theory lens, these strategies reflect an awareness of how learning occurs through observation, modeling, and social reinforcement. The call for more female role models, mentorship programs, and visibility campaigns aligns with SCT's emphasis on the importance of vicarious learning in building self-efficacy. When women in aviation education are consistently exposed to successful female figures in leadership and technical roles, they are more likely to perceive those pathways as attainable. This, in turn, can strengthen individual agencies and challenge internalized gender norms. Furthermore, the social environment plays a critical role in shaping expectations and behaviors; by altering institutional culture, SCT suggests that educators can foster more inclusive norms that support gender equity.

Quantitative findings also support these priorities. Participants expressed strong agreement with statements endorsing: Equal access to professional development (Item 23), Leadership opportunities for women (Item 26), and Partnerships with aviation organizations (Item 27). These responses underscore the need for both internal institutional reforms and strategic external collaborations to advance equity. Existing research supports the impact of such initiatives, highlighting how mentorship, leadership pathways, and network-building contribute to the recruitment, retention, and advancement of women in aviation and broader STEM fields (Ferla & Graham, 2019; Sobieralski & Hubbard, 2019).

Notably, while all proposed strategies were positively received, some, such as curriculum inclusivity (Item 20, Median=3.42) and gender-sensitive hiring and promotion practices (Item 25, Median=3.42), were rated slightly lower, though still within the "Agree" range. This may suggest that these areas are either perceived as less urgent or that institutions are in earlier stages of development in addressing them. Critical Feminist Theory encourages us to interpret this not as a lack of need but as an indicator of latent structural resistance or limited institutional awareness, particularly regarding hidden curricula and embedded hiring biases.

Nevertheless, the low standard deviations (ranging from 0.50 to 0.72) reflect a high level of consensus among participants. This suggests a readiness within the institutional culture to support gender equity initiatives, an encouraging finding that mirrors global trends calling for comprehensive structural, cultural, and pedagogical reforms in male-dominated sectors such as aviation (Gonzalo et al., 2024; Marintseva et al., 2022).

Conclusion

This study reveals generally positive perceptions of gender representation within the aviation education institution. Respondents agreed that women are adequately represented across the student population, faculty, and, to some extent, leadership positions. Female educators also reported relatively low levels of perceived discrimination, gender bias, or unequal treatment, suggesting that overt gender-based challenges may not be widely experienced within the institution. These findings may indicate a more inclusive institutional climate than that reported in much of the existing literature, which frequently documents persistent gender inequities in traditionally male-dominated fields such as aviation. However, despite these encouraging

perceptions, respondents also acknowledged continuing concerns regarding women's representation in leadership positions and the persistence of subtle or implicit gender biases within the academic environment. Moreover, participants expressed strong support for institutional strategies that promote gender equity, including policy reform, expanded professional development opportunities, greater recognition of women's achievements, structured mentorship programs, equitable leadership opportunities, and mandatory gender-awareness training. These findings suggest that while overt discrimination may be limited, respondents recognize that sustaining an inclusive educational environment requires ongoing institutional commitment and proactive efforts to prevent emerging inequities and address less visible systemic barriers.

These findings carry several practical and institutional implications. First, aviation education institutions are encouraged to formalize and strengthen gender-neutral hiring, promotion, and evaluation policies to ensure equitable opportunities, particularly in leadership positions where women continue to be underrepresented. Second, the strong support for mandatory gender-awareness training highlights the importance of regularly addressing unconscious bias and promoting inclusive practices among faculty, staff, and administrators. Third, respondents' endorsement of mentorship and professional networking initiatives underscores the value of structured support systems that can enhance the recruitment, retention, career advancement, and leadership development of women in aviation education. Finally, the recommendation to establish or strengthen institutional gender equality committees reflects the importance of organizational accountability in monitoring progress, evaluating existing policies, and implementing evidence-based initiatives that foster a culture of diversity, equity, and inclusion. Such preventive and developmental strategies can help preserve the positive institutional climate identified in this study while addressing subtle forms of bias that may not be readily apparent through quantitative survey measures alone.

Despite these contributions, several limitations should be considered when interpreting the findings. In addition to the relatively small sample size, this study was conducted within a single higher education institution and employed purposive sampling. Consequently, the findings reflect the unique institutional context of the participating university and should not be generalized to all aviation education settings. Institutional culture, program offerings, organizational policies, and the demographic composition of faculty and students may differ considerably across universities, aviation training organizations, and other educational institutions, potentially influencing perceptions and experiences of gender equity. Accordingly, the results should be interpreted as context-specific rather than broadly representative of the aviation education sector.

Future research should therefore include multiple institutions representing diverse geographical locations and aviation programs, employ larger and more heterogeneous samples, and utilize probability sampling techniques where feasible to improve the generalizability and external validity of the findings. Longitudinal research is also recommended to examine how perceptions and experiences of gender equity evolve over time, particularly following the implementation of institutional interventions such as mentorship programs, leadership development initiatives, or gender-inclusive policies. Such studies would provide more comprehensive evidence to inform institutional decision-making and contribute to the continued

advancement of gender equity in aviation education and other traditionally male-dominated academic disciplines.

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