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Toward A Gender-Inclusive Safety Culture: Perceptions of Aviation Students at the National Aviation Academy of the Philippines – Lipa Campus

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ABSTRACT: This study examined aviation students' perceptions of gender inclusivity and safety culture at the National Aviation Academy of the Philippines–Lipa Campus. Using a quantitative descriptive-comparative design, data were collected from 664 students through a researcher-developed questionnaire. Frequency, percentage, weighted mean, and independent-samples t-test were used to analyze the data. Results showed that respondents strongly agreed that the campus environment promotes respect and interpersonal treatment, inclusion and equal participation, institutional support and gender sensitivity, and safety culture and reporting mechanisms. Inclusion and equal participation obtained the highest grand weighted mean of 4.52, while institutional support and gender sensitivity received the lowest at 4.47. No significant differences were found between male and female students' perceptions of gender inclusivity ($p = .613$) and safety culture ($p = .463$). The study concludes that the campus has established a gender-inclusive safety culture, while recommending confidential reporting systems, training, visible support services, mentorship, and continuous assessment.

KEYWORDS: Aviation education, Gender inclusivity, Gender-inclusive safety culture, Safety culture, Student perceptions

I. INTRODUCTION

The aviation industry is acknowledged as one of the most safety-critical sectors in the world requiring a culture that gives foremost consideration to trust, accountability, and open communication. Safety culture is the collective values, beliefs, and norms that shape individuals' perceptions and their actions regarding safety (Patankar, 2003). The educational institutions where future aviation professionals are trained, the development of a strong safety culture is not only a regulatory requirement or an instructional one but also a key factor in the preparation of competent and responsible graduates. Yet, safety culture is always tied to the surrounding social environment. An excellent safety culture is characterized by inclusivity—where every student, no matter what, feels safe to participate, communicate and lead (Edmondson, 2018).

Aviation has, until fairly recently, been a men's world throughout its entire history. Even though there are initiatives aimed at attracting more women to the roles of pilots, engineers, and maintenance personnel, the male-female imbalance still persists (Yanıkoğlu, Kılıç, & Küçükönal, 2020; Marete & Wang, 2024). This imbalance is also reflected in aviation education, where female students are usually only a small fraction of the total number. Studies indicate that, apart from the disadvantage of being a minority, women in aviation learning environments face similar problems in the form of exclusion, stereotyping, and the requirement to prove their worth in areas that have already been marked as 'male' by culture (Casebolt, 2023). These situations, even if they do not involve direct discrimination, could still affect one's view of the situation as being fair or friendly, and one's feeling of being psychologically safe within the campus environment (Edmondson, 2018).

Imbalances in the aviation sector have been linked to the discussions on Diversity, Equity, and Inclusion (DEI). According to Albelo and O'Toole (2021), the incorporation of DEI into aviation schooling would create a milieu of respect, cooperation, and co-responsibility, which are

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the very characteristics of a safety culture. In another study, Jorge, O'Toole, and Bowyer (2022) demonstrated that pedagogical practices involving diversity, equity, and inclusiveness (DEI) have also contributed to students' mental health and well-being alleviating the anxieties and social isolation that students from non-diverse environments experience. They further asserted that gender inclusiveness is essential for pedagogical practices since gender inclusiveness possesses a moral and educational value that is inherently and dynamically connected to educational and developmental outcomes.

Across the globe, numerous educational institutions and organizations are taking or have recently taken active steps to increase opportunities for women in the aviation industry. According to the U.S. FAA Advisory Board (2022), an increase in number of women participating in the aviation industry will lead to innovations and enhancements in the safety reporting process as well an increased diversity in the top management positions in the industry. Corazza (2024) stated that participation of women is essential for sustainability and resilience of aviation industry. Their being there is a huge support to the human side of safety systems and it is an indicator that diversity is still very important to have a balanced and an adaptive aviation workforce. Just like the global initiatives, the academic institutions at the same time play a very important role as the first place where people's attitudes towards safety and inclusiveness get shaped.

The Philippines has been consistently improving equal rights and safe learning environments through the implementation of progressive national policies. The Safe Spaces Act (Republic Act No. 11313) provides a clear indication of the mission of educational institutions in helping to fight against gender-based harassment and the establishment of spaces in educational institutions characterized by respect, acceptance, and dignity (Philippine Commission on Women, 2020). The same way towards national growth, the signing of Republic Act No. 12255 in 2025, which changed the name of the Philippine State College of Aeronautics to the National Aviation Academy of the Philippines (NAAP), indicates the country's increasing dedication to the development of aviation education and its alignment with the best practices worldwide. It is a significant shift that NAAP campuses can cultivate their safety cultures that are inclusive and in accordance with national values.

At the NAAP–Lipa Campus, aviation students receive a very comprehensive training through the application of different professional and technical programs that highlight precision, discipline, and cooperation. For Academic Year 2025–2026, the NAAP–Lipa Campus has approximately 1,164 students, composed of 855 male and 309 female enrollees across different year levels (Source: Campus Registrar, 2025). The ratio of male to female students is quite significant as far as the perception of inclusivity and safety in the academic environment is concerned. The campus can be considered a miniature version of the aviation industry, thus, knowing its internal culture becomes crucial to allow all students—irrespective of their gender—to take on equal grounds in both learning and leading.

Research before this one has shown that how students perceive inclusiveness has an impact on their participation and voice behavior which in turn influence a strong safety culture. (Patankar, 2003; Edmondson, 2018). Reports submitted by students, sharing of ideas, and peer support, and all these are activities that increase learning and at the same time, lower the risk, are more likely to be done by students if they are provided with the psychological safety. On the other hand, environments that are biased or unfair may, without intending to, bring about the same effects as discouragement and thus group performance may sometimes be weakened. Casebolt (2023) and Dela Cerna et al. (n.d.) pointed out that female students are often socially invisible in the technical fields which, in turn, may lead to the eroded confidence and the obstructed professional growth. These negative perceptions can be dealt with if caught early during the training phase, hence preventing the issues from being transferred to the workforce.

In addition, the application of DEI in aviation education has resulted in graduates who are more flexible and able to work in teams (Albelo & O'Toole, 2021; Jorge et al., 2022). Thus, the formation of safety cultures that embrace all is a fortunate event for all parties involved as it relates to the standard of education and the readiness of the industry. According to Marete and Wang (2024) organizations that promote gender diversity receive operational efficiency, heightened creativity, and enhanced decision-making as their benefits. This indicates that gender diversity is a safety facilitator and not a mere social program.

The study, therefore, intends to look into how the students of NAAP–Lipa Campus view gender diversity and safety culture in their academic setting. It particularly investigates whether there are significant differences between the perceptions of male and female students regarding inclusivity, respect, and safety practices on campus. The study emphasizes the campus experience as opposed to training in the workplace, thus identifying the most important transition period wherein students assume professional values and behavior patterns.

The research not only adds to the growing literature on DEI and safety in aviation education but also offers grounded insights for institutional policy and curriculum development. The implications of the research may be helpful for administrators and teachers in the development of activities aimed at inclusion, safety value enhancement, and alignment of NAAP's mission with national requirements as well as global standards of aviation excellence.

Statement of the Problem

Gender inclusivity in aviation education remains an issue even when there are available institutional and legislative supports like the Republic Act No. 11313 (Safe Spaces Act of 2019) and the Gender and Development (GAD) programs at the National Aviation Academy of the Philippines (NAAP). The national and international policies that recognize women's rights and provide protection from discrimination are not always reflected in the real atmosphere of the campus.

The research intends to investigate the views of the aviation students at the NAAP–Lipa Campus regarding gender inclusion and safety culture in their academic environment. Besides, it will analyze the perceptual differences between male and female students, and assess the role of current institutional programs in promoting respect, inclusiveness, and safety among students.

In particular, the study will provide answers to these questions:

1. What are the demographic characteristics of the respondents with regard to:
   1.1. age; and
   1.2. sex?

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2. How do the respondents assess the campus environment in terms of:
   2.1. respect and interpersonal treatment;
   2.2. inclusion and equal participation;
   2.3. institutional support and gender sensitivity; and
   2.4. safety culture and reporting mechanisms?
3. Is there a significant difference between male and female students in their perceptions of gender inclusivity?
4. Is there a significant difference between male and female students in their perceptions of safety culture?
5. What recommendations can be proposed to strengthen a gender-inclusive safety culture at NAAP–Lipa Campus?

Hypothesis

In line with the study's objectives, the following null hypotheses were tested at the 0.05 level of significance:

H_{o1}: There is no significant difference between male and female aviation students in their perceptions of gender inclusivity at the National Aviation Academy of the Philippines–Lipa Campus.

H_{o2}: There is no significant difference between male and female aviation students in their perceptions of safety culture at the National Aviation Academy of the Philippines–Lipa Campus.

II. LITERATURE REVIEW

The academic study of a gender-inclusive safety culture within aviation has steadily increased in interest due to the industry being historically male-dominated and the importance of safety in aviation to the operations. This literature review highlights the synergies between gender inclusivity and safety culture as they pertain to the ways in which aviation students and professionals perceive and experience organizational cultures, industry norms, and gender dynamics within aviation.

Gender Disparities and Aviation Culture

Traditionally, aviation has been primarily a male profession, especially relative to technical and leadership positions. The composition of the labor force has played a significant role in enabling the formation of organizational cultures that implicitly, through bias and stereotypes, and structurally through barriers, often marginalize women (Gorlin & Bridges, 2021). Discrimination, restricted career opportunities, and stress experienced due to one's gender still plague women pilots and other aviation-related female employees (Wilson, 2005; Recio et al., 2024). These results point to the fact that the organizational culture is a major factor determining the gender imbalances and the psychologists' feelings of safety in aviation.

Gender-Inclusive Safety Culture: Conceptual Underpinnings

The notion regarding a safety culture that takes in both genders is a fresh and modern development of the aviation safety area that has begun to reshape traditionally based safety systems by accepting the principles of diversity and inclusion together with those of safety. It creates a situation where every individual, irrespective of gender, is psychologically secure and regarded as a contributor in safety-sensitive areas (Jorge, O'Toole, & Kim, 2023). Studies indicate that introducing diversity and inclusion training in aviation programs at universities can foster cooperation and also eliminate some of the difficulties arising from prejudice and harassment. Politically speaking, global airlines' organizations are suggesting and recommending that having an inclusive culture is not only good for safety but also for the general performance of the organization (IATA, 2024; Mouton & Morrison, 2022).

Aviation Students' Perceptions as a Lens

The opinions of students studying aviation on gender inclusivity serve as an indication of the safety culture in the future of the industry. Research indicates that female students in aviation training situations generally feel less part of the group and do not have much confidence in safety teams (Jorge et al., 2023). If schools bring about the inclusion training and the presence of females in aviation education, the students' motivation, communication, and safety consciousness will go up (Recio et al., 2024). It can be concluded that the students' professional identity and attachment to safety values in the long run depend on the teaching staff's inclusiveness.

Impact on Safety Outcomes

Inclusion of all genders is a matter that cannot be taken lightly. It is not only an issue of justice but also a contributor to operational safety among others. Research has found that a diversified workforce not only has but also contributes to excellent safety performance through its attributes like enhanced alertness, effective communication, and teamwork (Wilson, 2005; Gorlin & Bridges, 2021). Conversely, gender conflicts can create barriers to communication and prevent timely decisions during crises. According to IATA (2024), companies that have already begun to implement gender-sensitive training have reported their major advances in collaboration and safety of the teams.

Structural Barriers and Recommendations

Recent developments have brought about some changes but the barriers have not been totally eliminated and they are both structural and cultural. The standards of men still rule the aviation industry and the ways of reporting harassment connected to gender are extremely limited (Mouton & Morrison, 2022). The global accords put forth the same solutions prioritizing leadership accountability, anti-discrimination policies, and education (IATA, 2024; ICAO, 2025). At the local level, research in the Philippines points out the necessity of gender-inclusive training environments and stronger institutional policies in line with ASEAN and global standards (Recio et al., 2024).

International and Regional Contexts

International organizations like ICAO and IATA consider gender equality as one of the world's aviation developments and even suggest the inclusion of gender perspectives in the national safety frameworks (Gender Equality and ICAO, 2025; IATA, 2024). In the Philippines, the global priorities are reflected in various initiatives in the aviation sector such as education and policy that aim at gender-neutral participation. By incorporating gender parity in the safety culture and training, the coming generation of air transport workers will be able to realize not just the highest standards of safety but also the social good of equity.

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Synthesis and Implications

In aviation, a gender-inclusive safety culture not just confronts old inequities but also becomes a contributor to the overall aviation safety, the development of good relations within the organization, and performance of the organization itself. Research has shown that where gender inclusivity is given priority through educational initiatives, leadership, and policy reforms, there is an improvement in safety as well as in the workforce's health and well-being. It is thus necessary to have ongoing research as well as institutional support to develop an aviation milieu where inclusiveness and safety are not only the two sides of the same coin but also the reinforcing goals.

III. METHODOLOGY

This study utilized a quantitative descriptive-comparative research design to assess the gender-inclusive safety culture of the National Aviation Academy of the Philippines–Lipa Campus. It examined students' perceptions of the campus environment in terms of respect and interpersonal treatment, inclusion and equal participation, institutional support and gender sensitivity, and safety culture and reporting mechanisms.

The respondents consisted of 664 aviation students from NAAP–Lipa Campus. A researcher-developed survey questionnaire was used to gather data on respondents' demographic characteristics and perceptions of gender inclusivity and safety culture.

The collected data were analyzed using frequency and percentage, weighted mean, and independent samples t-test. Frequency and percentage were used to describe the respondents' profiles, weighted mean was used to assess perceptions of the campus environment, and the t-test was applied to determine significant differences between male and female students' perceptions at a 0.05 level of significance. The findings served as the basis for proposing recommendations to strengthen a gender-inclusive safety culture in the institution.

IV. RESULTS AND DISCUSSION

This section presents and discusses the findings of the study based on the data gathered from the respondents. The results are organized according to the research questions, including the respondents' profile, assessment of the campus environment, and differences in perceptions of gender inclusivity and safety culture.

Table 1: Frequency Distribution of the Respondents in Terms of Age

Age	*Frequency*	*Percentage*
17-19	321	48
20-22	315	47
23-25	24	4
26-28	4	1
Total	**664**	**100%**

Table 1 presents the frequency distribution of respondents according to age. Most respondents (321) are from aged 17-19 years with 48%, 315 respondents fall in 20-22 years of age with 47%, 24 respondents in aged 23-25 years with 4% and aged 26-28 years with 1% or 4 respondents. This shows that the study participants were largely from aged 17-22 years suggesting larger illustration of this age within the sample.

Table 2: Frequency Distribution of the Respondents in Terms of Sex

Sex	*Frequency*	*Percentage*
Female	187	28
Male	477	72
Total	**664**	**100%**

Table 2 presents the distribution of respondents according to sex. The data reveals that 72 % were male and 28 % were female. This indicates that the study participants were predominantly male, signifying greater representation of this sex within the sample.

Summary of the Respondents' Demographic Profile

In response to the first research question, the findings showed that most respondents were between 17 and 22 years old. The largest age group was 17–19 years old, comprising 48% of the respondents, followed closely by those aged 20–22 years at 47%. In terms of sex, 72% of the respondents were male, while 28% were female. These findings indicate that the sample was composed mainly of young adults and was predominantly male.

Table 3: Weighted Mean and Verbal Interpretation on the assessment of the campus environment in terms of respect and interpersonal of the Respondents

Statement	**Weighted Mean**	**Verbal Interpretation**
All students, regardless of gender, are treated with courtesy and professionalism.	4.60	Strongly Agree
My classmates and instructors show mutual respect in classroom and training sessions.	4.56	Strongly Agree
I feel comfortable expressing my views without fear of being judged based on gender.	4.44	Strongly Agree

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Faculty members treat male and female students equally in terms of performance expectations.	4.46	Strongly Agree
Conflicts or misunderstandings among students are resolved fairly and respectfully.	4.44	Strongly Agree
My peers value teamwork and cooperation regardless of gender.	4.53	Strongly Agree
I have not experienced or witnessed gender-based teasing or stereotyping on campus.	4.41	Strongly Agree
Grand Weighted Mean	4.49	Strongly Agree

Table 3 shows the results evaluating respondent perceptions on the campus environment in terms of respect and interpersonal. The areas where respondents felt the strongest level of agreement centered around professional courtesy and mutual respect are in the statements: “All students, regardless of gender, are treated with courtesy and professionalism” with a mean of 4.60 demonstrates that the campus successfully maintains a highly professional environment where student dignity is respected regardless of gender. “My classmates and instructors show mutual respect in classroom and training sessions” with mean of 4.56, illustrates that classroom and training environments are highly collaborative and respectful, showing strong interpersonal dynamics between instructors and students, as well as among peers. “My peers value teamwork and cooperation regardless of gender” with mean of 4.53 shows that the students strongly believe that their peers value cooperation and teamwork based on merit and collaboration rather than gender.

Moderately high area is shown in the statement, “Faculty members treat male and female students equally in terms of performance expectations” with mean of 4.46. Respondents highly agree that faculty members maintain objective, gender-neutral academic standards and expectations.

While still firmly in the “Strongly Agree" category, these statements received the lowest weighted means relative to the others. They point to areas that, while highly functional, could still benefit from continuous support. “I feel comfortable expressing my views without fear of being judged based on gender” and “Conflicts or misunderstandings among students are resolved fairly and respectfully” with both mean of 4.44, show that expressing opinions without fear of gender-based judgment and resolving conflicts respectfully are highly supported, but remain areas where a tiny fraction of students may feel slight hesitation. “I have not experienced or witnessed gender-based teasing or stereotyping on campus” with mean of 4. 41, indicates that while the vast majority have not witnessed or experienced gender-based teasing, it remains the lowest-scoring item, suggesting minor or isolated incidents may still occur.

In conclusion, findings reveal extremely positive environment and inclusive approach to issues relating to gender equality and mutual respect on campus. Every statement evaluated was interpreted as “Strongly agree”, leading to a Grand Weighted Mean of 4.49, which was interpreted as Strongly Agree. This suggests that the institution has highly successful policies and a welcoming culture regarding gender equity and student relations.

Table 4: Weighted Mean and Verbal Interpretation on the assessment of the campus environment in terms of inclusion and equal participation of the Respondents

Statement	Weighted Mean	Verbal Interpretation
Both male and female students are given equal opportunities to lead group projects.	4.53	Strongly Agree
Classroom and laboratory activities promote collaboration among all genders.	4.52	Strongly Agree
I believe that gender does not affect recognition or academic opportunities.	4.55	Strongly Agree
Female students are encouraged to pursue technical or leadership roles in aviation.	4.50	Strongly Agree
Student organizations and events promote inclusivity and active participation.	4.53	Strongly Agree
I have equal access to school resources and training opportunities regardless of gender.	4.54	Strongly Agree
My instructors use inclusive language and examples that represent both genders.	4.49	Strongly Agree
I feel a sense of belonging and acceptance within my academic community.	4.52	Strongly Agree
Grand Weighted Mean	4.52	Strongly Agree

Table 4 shows the results evaluating respondent perceptions on the campus environment in terms of inclusion and equal participation. The highest-rated aspects of the academic environment focus on fairness in academic growth and resource allocation in the statements: “I believe that gender does not affect recognition or academic opportunities” with mean of 4.55, indicates a strong belief among students that gender does not bias academic recognition or opportunities. “I have equal access to school resources and training opportunities regardless of gender” with a mean of 4.54, shows that students strongly agree that they enjoy equal access to vital school resources and hands-on training opportunities regardless of their gender.

There is robust agreement regarding active representation and peer dynamics in the statements, “Both male and female students are given equal opportunities to lead group projects” and “Student organizations and events promote inclusivity and active participation” with both mean value of 4.53. The results demonstrate that the students feel both male and female peers have equal footing to take charge in academic group projects, supported by student organizations that actively champion inclusivity. While the statements “Classroom and laboratory activities promote collaboration among all genders” and “I feel a sense of belonging and acceptance within my academic community” both with mean of 4.52, indicate that the classroom and laboratory activities actively foster healthy, cross-gender collaboration, which translates directly into a high sense of belonging and acceptance within the academic community.

Even the lower-scoring statements remain firmly within the "Strongly Agree" category, highlighting highly successful institutional practices: “Female students are encouraged to pursue technical or leadership roles in aviation” with mean of 4.50, demonstrates highly successful

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efforts by the institution to actively encourage female students to pursue technical and leadership roles in a historically male-dominated industry like aviation. Statement "My instructors use inclusive language and examples that represent both genders" with mean of 4.49, even this is the lowest score in the dataset, it still represents a strong consensus that instructors are mindful of using inclusive language and balanced, representative examples in their teaching.

The results indicate an overwhelmingly positive and inclusive environment. Every single surveyed statement received a verbal interpretation of "Strongly Agree," yielding an outstanding Grand Weighted Mean of 4.52. This strongly suggests that the institution has successfully cultivated a highly equitable, supportive, and gender-fair educational space.

Table 5: Weighted Mean and Verbal Interpretation on the assessment of the campus environment in terms of institutional support and gender sensitivity of the Respondents

Statement	Weighted Mean	Verbal Interpretation
The campus regularly conducts gender awareness or sensitivity seminars.	4.36	Strongly Agree
I am aware of the school's policies against gender-based harassment.	4.50	Strongly Agree
The Guidance Office or CODI is approachable and responsive to gender-related concerns.	4.49	Strongly Agree
Faculty and staff are trained to handle gender issues confidentially and fairly.	4.46	Strongly Agree
The institution clearly communicates its commitment to equality and respect.	4.49	Strongly Agree
Students are encouraged to participate in GAD or safety-related activities.	4.49	Strongly Agree
I feel confident that the school will take action if gender discrimination occurs.	4.49	Strongly Agree
Gender inclusivity is reflected in campus policies, posters, and communication materials.	4.49	Strongly Agree
Grand Weighted Mean	4.47	Strongly Agree

Table 5 shows the results evaluating respondent perceptions on the campus environment in terms of institutional support and gender sensitivity. The highest-scoring statement "I am aware of the school's policies against gender-based harassment" with a mean of 4.50, indicates that students are highly aware of the school's policies against gender-based harassment. This points to effective student orientation and dissemination practices.

The statements "The institution clearly communicates its commitment to equality and respect", "Students are encouraged to participate in GAD or safety-related activities", "Gender inclusivity is reflected in campus policies, posters, and communication materials" and "I feel confident that the school will take action if gender discrimination occurs" with mean value of 4.49 each, indicate that there is a consistent, highly positive response regarding the approachability of support systems like the Guidance Office or CODI (Committee on Decorum and Investigation). Furthermore, students strongly agree that the campus visible reinforces inclusivity through institutional communications, posters, and proactive activities such as Gender and Development initiatives. Whereas, students express high confidence that the administration will take immediate, appropriate action if gender discrimination occurs.

The statement, "Faculty and staff are trained to handle gender issues confidentially and fairly" with mean of 4.46 shows that respondents strongly agree that faculty and staff are properly trained to manage sensitive gender issues with fairness and confidentiality. This reflects a trusted professional environment. While still firmly in the "Strongly Agree" category, the statement "The campus regularly conducts gender awareness or sensitivity seminars" with mean of 4.36 scored the lowest relative to the other metrics. This suggests that while existing programs are impactful, students would likely benefit from more frequent or widely scheduled seminar offerings throughout the academic year.

The results indicate a very high level of institutional trust and awareness among the respondents. Among the eight statements, all received a rating of "Strongly Agree," giving a Grand Weighted Mean of 4.47. These results indicate that the institution has effectively communicated its anti-harassment mechanisms and has responsive departments for dealing with gender issues.

Table 6: Weighted Mean and Verbal Interpretation on the assessment of the campus environment in terms of safety culture and reporting mechanisms of the Respondents

Statement	Weighted Mean	Verbal Interpretation
Safety protocols are clearly explained and consistently implemented.	4.53	Strongly Agree
Students are encouraged to report safety concerns or near-miss incidents.	4.52	Strongly Agree
Everyone, regardless of gender, feels safe to report unsafe behaviors or conditions.	4.52	Strongly Agree
Instructors promote open communication and feedback on safety issues.	4.47	Strongly Agree
Gender does not affect how seriously safety concerns are addressed.	4.50	Strongly Agree
I feel psychologically safe when working or training with my peers.	4.48	Strongly Agree
The campus environment supports both physical safety and emotional well-being.	4.51	Strongly Agree
Grand Weighted Mean	4.50	Strongly Agree

Table 6 presents survey data evaluating respondent perceptions on the campus environment in terms of safety culture and reporting mechanisms. The statement "Safety protocols are clearly explained and consistently implemented" has the highest-rated statement in the dataset with mean of 4.53. It highlights that the institution's core safety guidelines are not just well-documented, but are actively, clearly explained and consistently put into practice during campus activities and training.

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A healthy safety culture depends entirely on students feeling secure enough to report hazards. The data indicates the institution excels in the statements: “Students are encouraged to report safety concerns or near-miss incidents” and “Everyone, regardless of gender, feels safe to report unsafe behaviors or conditions” with both mean value of 4.52. Students strongly agree that they are encouraged to call out safety hazards or near-miss incidents before they escalate into accidents. Crucially, students feel that gender does not act as a barrier to reporting, ensuring everyone feels equally empowered to speak up about unsafe conditions. Whereas statement “Gender does not affect how seriously safety concerns are addressed” with mean of 4.50 indicates that safety reports are taken seriously by the administration, completely independent of the reporter's gender.

Students highly agree in the statements, “The campus environment supports both physical safety and emotional well-being” with a mean of 4.51, that the campus effectively balances both physical security measures and emotional well-being support. The statement, “I feel psychologically safe when working or training with my peers” with mean of 4.48 shows that students feel highly secure and comfortable collaborating and training with their peers without fear of interpersonal friction or judgment. While the lowest score in the table, “Instructors promote open communication and feedback on safety issues” with a mean of 4.47 is still an excellent indicator that instructors maintain a highly communicative, open-door policy regarding safety feedback.

The findings represent an outstandingly positive, proactive, and secure academic environment. Every statement evaluated in this survey section achieved a verbal interpretation of "Strongly Agree," yielding an exceptional Grand Weighted Mean of 4.50. This indicates that the institution has highly robust physical and psychological safety systems that are well-understood, consistently maintained, and perceived as gender-fair by the student body.

Summary of Respondents’ Assessment of the Campus Environment

In response to the second research question, the respondents assessed the campus environment positively across all four dimensions. Respect and interpersonal treatment obtained a grand weighted mean of 4.49, inclusion and equal participation received 4.52, institutional support and gender sensitivity obtained 4.47, and safety culture and reporting mechanisms received 4.50. All dimensions were interpreted as “Strongly Agree.” These results suggest that students generally experience the campus as respectful, inclusive, supportive, and safe regardless of gender.

Among the four dimensions, inclusion and equal participation obtained the highest grand weighted mean of 4.52, while institutional support and gender sensitivity received the lowest at 4.47. Although both ratings remained high, the results suggest that institutional programs, particularly gender-awareness activities and support mechanisms, may still be strengthened.

Table 7: T-statistics Value Between male and female students in their perceptions of gender inclusivity

Sex	Mean	SD	df	t-value	p-value	Interpretation
Male	4.52	0.0002	6	0.52	0.613	No Significant
Female	4.51	0.01	6			

Table 7 presents the results of an independent samples t-test between male and female students in their perceptions of gender inclusivity. Male respondents got a mean of 4.52 while female respondents got 4.51. Male scores show exceptionally low variability of SD = 0.0002, while female scores show slightly higher but still very minimal variability SD = 0.01. This indicates that responses within both groups are highly consistent and clustered closely around their respective means. The statistical analysis reveals that there is no significant difference between the two groups with a t-value of 0.52. This relatively low t-value indicates that the difference between the sample means is very small relative to the variation in the data. Because the calculated p-value of 0.613 is much larger than alpha value of 0.05, this shows that there is no significant difference between the perception of male and female students in gender inclusivity. This result carries important practical implications; gender does not play a significant role in shaping the respondents' views. Both male and female students perceive the measured variables such as campus environment, safety, or gender equality with the same high level of agreement and satisfaction, demonstrating equity and consistency in their experiences.

Test of Difference in the Perceptions of Gender Inclusivity

In response to the third research question, the independent-samples t-test showed no significant difference between male and female students in their perceptions of gender inclusivity. The computed p-value of 0.613 was greater than the 0.05 level of significance. Therefore, the first null hypothesis was not rejected. This indicates that male and female respondents generally shared similar perceptions of gender inclusivity on campus.

Table 8: T-statistics Value Between male and female students in their perceptions of safety culture

Sex	Mean	SD	df	t-value	p-value	Interpretation
Male	4.51	0.0002	7	0.7585	0.463	No Significant
Female	4.49	0.07	7			

Table 8 presents the results of an independent samples t-test between male and female students in their perceptions of safety culture. The mean score for men is 4.51, while the standard deviation is low at 0.0002, which demonstrates that the scores for men group are very much alike, meanwhile, the female category has a mean score of 4.49 but with a higher standard deviation of 0.07, meaning the females' scores were more

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diverse compared to their male counterparts. In this case, the p-value of 0.463 is much higher than alpha 0.05, which indicates that there are no major differences in the perceptions of safety culture between males and females since the t-value is equal to 0.7585.

Test of Difference in the Perceptions of Safety Culture

In response to the fourth research question, the independent-samples t-test revealed no significant difference between male and female students in their perceptions of safety culture. The computed p-value of 0.463 was greater than the 0.05 level of significance. Therefore, the second null hypothesis was not rejected. This suggests that male and female students generally experienced and assessed the institution's safety culture in a similar manner.

Table 9: Weighted Mean and Verbal Interpretation on the assessment of actions to strengthen gender-inclusive safety culture of the Respondents

Statement	Weighted Mean	Verbal Interpretation
The institution should strengthen policies and programs that promote gender equality and respectful behavior among students.	4.53	Very High
A clear gender-inclusive safety framework should be integrated into campus operations and aviation training.	4.50	Very High
Faculty and staff should receive regular training on gender sensitivity and inclusive communication.	4.50	Very High
The Committee on Decorum and Investigation (CODI) should be more visible and accessible to students.	4.48	Very High
Classroom and laboratory activities should ensure balanced participation between male and female students.	4.52	Very High
The campus should conduct regular seminars or forums on diversity, equity, and inclusion in aviation.	4.46	Very High
Student leaders should be involved in planning and implementing inclusivity and safety programs.	4.49	Very High
Mentorship programs should be established to support female students in aviation-related courses.	4.47	Very High
Reporting systems for harassment or discrimination should be confidential and easy to access.	4.54	Very High
Posters, campaigns, and other materials promoting inclusivity and safety should be visible around the campus.	4.45	Very High
The institution should recognize students and staff who demonstrate respect and inclusivity in their actions.	4.48	Very High
More women professionals in aviation should be invited as speakers or mentors in school events.	4.46	Very High
The safety reporting system should allow students to share concerns without fear of bias or judgment.	4.53	Very High
Collaboration among male and female students in projects and training should be actively encouraged.	4.50	Very High
Regular assessment of gender inclusion and safety culture should be conducted to monitor progress.	4.51	Very High
Grand Weighted Mean	4.49	Very High

Table 9 shows the results evaluating respondent perceptions on the actions to strengthen gender-inclusive safety culture. The statement that received the strongest agreement is "Reporting systems for harassment or discrimination should be confidential and easy to access". This represents the highest single weighted mean of 4.54, showing that students place the utmost importance on secure, anonymous reporting channels. Both statements "The institution should strengthen policies and programs that promote gender equality and respectful behavior among students" and "The safety reporting system should allow students to share concerns without fear of bias or judgment" got a mean value of 4.53. These scores reinforce that structural safety and actionable policy are top student demands.

The areas sitting firmly in the mid-range reflect strong expectations around active inclusivity in daily campus operations. These statements are "Classroom and laboratory activities should ensure balanced participation between male and female students" with mean of 4.52 and "Regular assessment of gender inclusion and safety culture should be conducted to monitor progress" with mean of 4.51, show that respondents want concrete actions in the learning environment. And the statements "A clear gender-inclusive safety framework should be integrated into campus operations and aviation training", "Faculty and staff should receive regular training on gender sensitivity and inclusive communication' and "Collaboration among male and female students in projects and training should be actively encouraged" with mean value of 4.50 each, show a specific expectation to weave these principles directly into technical training tracks.

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While still interpreted as "Very High," the lowest means in the data set hover around 4.45 to 4.46. The statements “The campus should conduct regular seminars or forums on diversity, equity, and inclusion in aviation” and “More women professionals in aviation should be invited as speakers or mentors in school events” both have mean of 4.46, and “Posters, campaigns, and other materials promoting inclusivity and safety should be visible around the campus” have mean of 4.45, indicate that while students value awareness campaigns, seminars, and passive visibility like posters, they prioritize hard structural protections such as confidential reporting and strict policies slightly more.

The grand weighted mean is 4.49, which carries an overall verbal interpretation of very high. The high average score implies a powerful agreement among the audience. There is a remarkably strong demand for and high level of support regarding the establishment, maintenance, and enforcement of extensive gender sensitivity initiatives.

Summary of the Proposed Actions to Strengthen Gender-Inclusive Safety Culture

In response to the fifth research question, the respondents expressed a very high level of support for actions intended to strengthen a gender-inclusive safety culture, as reflected by the grand weighted mean of 4.49. The top-rated suggestion involved setting up confidential and accessible reporting platforms for harassment and discrimination cases with a weighted mean of 4.54. Respondents were also enthusiastic about stronger gender equality policies, bias-free reporting of safety issues, and equitable participation in learning endeavors and constant evaluation as well as faculty and staff training.

V. CONCLUSION

Based on the findings, the respondents were predominantly 17 to 22 years old and male. This profile reflects the relatively young and male-dominated composition of the student population included in the study.

The respondents generally perceived the campus environment as respectful, inclusive, supportive, and safe. There was a unanimous agreement that the students were treated with courtesy and professionalism, given equal opportunities, supported through gender-sensitive policies, and reassured to report anything relevant to safety. The dimension with the highest rating was inclusion and equal participation, while the ones with the lowest were institutional support and gender sensitivity, both rated positively.

The study further found no significant difference between male and female students in their perceptions of gender inclusivity. Likewise, no significant difference was found in their perceptions of safety culture. The results show that there is no significant difference in the answers given by male and female respondents.

On the other hand, the respondents have a very high level of demand for further improvements. For example, they mentioned the importance of confidentiality in reporting incidents, effective policies concerning gender equality, training of personnel, the fact that students should be involved in training and learning, and regular assessment of gender inclusivity and safety level.

To summarize, it is reasonable to claim that NAAP–Lipa Campus has built a solid basis for creating and maintaining a gender-sensitive culture; nevertheless, this does not imply that there is no need for further improvement. The institution needs to implement some measures directed toward making reporting channels more private, conducting gender sensitization trainings and awareness programs, improving visibility of the support office and frequent assessments. Continuous control and implementation of new practices are needed to demonstrate that gender inclusiveness and safety are not only written on paper but also in practice.

VI. RECOMMENDATIONS

Based on the findings of the study, the following recommendations are proposed to strengthen the gender-inclusive safety culture of the National Aviation Academy of the Philippines–Lipa Campus. These recommendations aim to enhance institutional practices, support systems, and inclusive learning environments.

1. **Enhance the confidentiality of reporting channels.** The institution needs to create confidential and accessible reporting channels so that all incidents of harassment, discrimination, unsafe conditions, or near misses can be recorded. The students have to be informed clearly about the process of reporting and its implications for their privacy.
2. **Create a safe framework for both genders.** NAAP- Lipa Campus could create a framework that addresses gender issue through the policies, `safety procedures`, reporting mechanisms and accountability for its activities and aviation training.
3. **Be consistent in providing appropriate training.** Faculty and staff members, as well as institutional representatives should take advantage of gender sensitivity, inclusive communication and complaint management training.
4. **Make gender-related events more frequent and visible.** Seminars on gender awareness and diversity, as well as activities related to gender and development and safety initiatives should be held on a regular basis and incorporated into various courses and introductory programs.
5. **Encourage equal participation of all genders.** Faculty representatives should ensure that both technical work and training are equally done among the representatives of different genders.
6. **Increase the visibility of support offices.** Information about the aims and functions of CODI, Guidance Office and support units should be sent out through student handbooks, orientations and institutional announcements.
7. **Provide mentorship opportunities.** Women professionals in the industry and alumni can be invited to serve as speakers and mentors in order to motivate students, especially women, to pursue technical and leadership careers in aviation industry.
8. **Be involved in regular assessment process.** It is necessary for the academy to conduct gender inclusivity and safety culture assessment through surveys, interviews and discussions. The results should be used to improve policies and programs of the academy.

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