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An Exploration on Pilots' and Student Pilots' Perspectives towards the Gender Bias in Thai Aviation Industry †

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Abstract: Since the aviation industry is acknowledged as the male-dominated filed, the existence of female pilots in the cockpit has long been controversial over decades. However, it is revealed by many aviation organizations that the number of women pilots has been growing constantly recently. Several studies have been conducted to explore female pilots' perspective towards the existing gender bias in the aviation field in the global scale. Meanwhile in Thailand, there is the scarcity of studies on the similar topic, especially perspectives towards the factors and motivations driving female pilot to enter the aviation industry in Thailand. This study purposes to investigate the perspectives of female student pilots, a female pilot and a male pilot towards the negative gender stereotypes in the pilot profession in Thai context. A mixed-method questionnaire was conducted to collect data by having two main approaches: a Likert-scale and close-ended questionnaire and the semi-structured interview from eight participants including six female student pilots (FSP), one female professional pilot (FP) and one male professional pilot (MP). The results yielded from all female participants revealed that gender prejudice still exists in the industry, which resulted in female pilots having to prove themselves and their skills set to be accepted in both the training duration and working period. However, all participants all opine that the aviation industry has recently seen the lesser degree of sexual bias towards female pilots and the positive trend of more female pilots stepping into this male-dominated field.

Keywords: female pilots; pilots' perspective; gender bias in the aviation industry; female student pilot

1. Introduction

Although women have entered the area of aviation for almost half a century, it cannot be denied that the notion of women working in the cockpit still sounds uncommon since the pilot job has traditionally been regarded as the 'male-dominated' profession. According to CAPA (2018), the female pilots share tiny percentages of 4.4% and 4.3% in US airlines and UK airlines respectively. For the past decade, the number of women pilots has been growing gradually, but by less than 1 part per thousand. In general, the pilot job is considered to require masculine characteristics such as physical and mental strength, great leadership, advanced technical skills and high degree of responsibility for the flight safety. Thus, being a woman was regarded as a disadvantage and might be underrepresented in the field.

2. Literature Review

Although women have entered the area of aviation for almost half a century, it cannot be denied that the notion of women working in the cockpit still sounds uncommon since the pilot job has traditionally been regarded as the 'male-dominated' profession. According to CAPA (2018), the female pilots share tiny percentages of 4.4% and 4.3% in US airlines and UK airlines respectively. For the past decade, the number of women pilots has been growing gradually, but by less than 1 part per thousand (ibid). In general, the pilot job is considered to require masculine characteristics such as physical and mental strength, great leadership, advanced technical skills and high degree of responsibility for the flight safety. Thus, being a woman was regarded as a disadvantage and might be underrepresented in the field. A number of studies have explored the existence of this occupational stereotype in many aspects such as the consequent obstacles and the perspectives towards female pilots. The majority of studies illustrates the challenges which females have to encounter when they decide to be a pilot. According to Simeone (1986), women have to experience the problem of "gender, educational and occupational stereotypes concerning their physical, cognitive and psychological abilities". Also, they are usually discriminated based on their gender [3-4] and even sexually harassed [5]. It is revealed out that some negative gender-related remarks have been made on women pilots from both male colleagues and passengers [6]. The subject of pregnancy and maternal leave is another contributor to the less acceptability of women in the pilot profession.

Despite the existing stereotype in the field, several studies have found the positive and changing attitudes towards the female pilots. All male pilot respondents from McCarthy et al.'s (2015) study in UK revealed that they enjoy flying with female pilots due to more relaxed and less competitive environment in the cockpit than flying with male pilots. In terms of flying performance and accidents, the statistics in two decades: 1983–1992 and 1993–2002, have shown that the ratios of errors caused by female pilots were hardly different from those of male pilots [7]. It is also suggested by several studies [6-7] that other factors such as individual flying experiences and pilot ages could contribute to the successful flight apart from pilots' gender.

In comparison to the global context, there is the rareness of studies on the perspectives of female pilots towards the factors and motivations driving them to enter the aviation industry in Thailand. Also, that no investigations have been undertaken as to female student pilots produces a major knowledge gap. As such, this study aims to investigate the perspectives of female student pilots towards the strong gender stereotypes in the pilot profession in Thai context and to identify the factors affecting their education, flight training and job opportunities in Thailand.

3. Research Methodology

3.1. Data Collection

The methodological approach taken in this study is a mixed methodology as the researchers aim to the explore dichotomies between the existing image of women working as pilots and the perspective of female student pilots, female pilots and male pilots. According to Gray (2015), a mixed-method questionnaire is the flawless combination of all the strengths of closed-ended and open-ended question. In this study, the mixed-method survey was conducted to collect data by having two main approaches: a Likert-scale and close-ended questionnaire and the semi-structured interview. The administration of a Likert-scale and close-ended questionnaire was conducted to investigate the degree of perception on the gender bias existing in the aviation industry held by pilot subjects while the semi-structured approach was chosen because, according to Gray (2015), it allows the interviewer to obtain more details of views and perspectives from the respondents and also to probe more questions with the further explanation. Also, the interviewer could understand the existing of experience and the underlying reasons for the particular experiences. Each question had Thai transcripts to accommodate all participants in case of the different levels of English proficiency and to reduce any misunderstandings.

3.2. Data Analysis

Firstly, descriptive statistics were employed to analyse the quantitative results from the closed-ended questions to measure general perspectives of both student pilots and professional pilots towards the gender bias in the aviation industry. Secondly, thematic analysis was conducted in the NVivo software to identify the perspectives of female student pilots towards particular issues emerged in the controversy of gender prejudice such as experiences of sexual harassment during operation and maternity.

3.3. Participants

Eight participants were recruited from pilots in Thailand in all levels. In this number, the participants can be divided into three groups which are six female student pilots (FSP), one female professional pilot (FP) and one male professional pilot (MP). The first group of interviewees was recruited from the senior year aeronautical engineering students at International Academy of Aviation Industry at King Mongkut's Institute of Technology Ladkrabang, Bangkok, Thailand while the professional pilots from both gender were recruited through snowball sampling. Male student pilots were not included due to the fact that the researchers only require the experiences of female student pilot during the training.

The demographic information of each female student participant (FSP) and a female professional pilot (FP) together with a male professional pilot (MP) could be seen in Tables 1 and 2 respectively.

Table 1. The background information of FSP subjects.

Respondent	Duration of Flight Training	The CPL License
1	12 months	No
2	8 months	Yes
3	10 months	Yes
4	12 months	No
5	1 month	No
6	12 months	Yes

Table 2. The background information of FP and MP subjects.

Respondent	Group	Types of Instrument	Rank	Flight Hours	Years of Experience with Commercial Aircraft
7	FP	Boeing 737–800	Captain	5000	6.5
8	MP	Boeing 777 Boeing 787	Captain	2400 2600	8

All participants were recruited with the snowball sampling so that the researcher could acquire more in-depth opinions of insiders. This sampling method also facilitated the location of the proper subjects for the research.

4. Results, Discussions, and Conclusion

4.1. Backgrounds

Approximately two-third of the FSP participants have never encountered sexist remarks from male pilot students, while half of them have encountered sexist remarks from male instructors. However, none of the participant believed that it is harder for female to train as a pilot than the male counterparts.

Half of FSP subjects acknowledge no differences in the way they and their male counterparts obtained training, while the other half agreed that the differences in training still exist, from the slight to moderate degree. One FSP revealed that some male instructors implied the discomfort during training and tended not be as intimate with FSP as in male student pilots.

Both FP and MP participants also agreed that there are differences in the way in which men and women approached training. The FP further explained that the differences come from the way flight instructor would treat the female student pilots, which generally softer than treating male student pilots. The MP commented that differences come from body's physical condition, which would result in different training level.

4.2. Perspective on Gender Bias

Table 3 reveals the perspective on gender bias of the participants. Participants are agreed that a pilot is a man dominated field. Obviously, female participants believe that gender bias still exists in the industry, which resulted in women pilot having to prove themselves and their skills set to be accepted. However, the MP has different perspective on women pilot and strongly disagree that women have to work harder, have to prove themselves to be accepted in the industry, despite the fact that the participant has never flown with a woman co-pilot before.

Table 3. Perspective on Gender Bias.

Statement	FSP Average Score	FP Score	MP Score
A pilot is a man dominated field	3.167	4	4
Women have to work harder within the industry to be accepted	3.167	4	1
The expectations of women pilots differ to those of men pilots	3.000	5	1
Women have to prove themselves and their skill set to be accepted	3.833	5	1
Women pilots tend to adopt masculine type behaviours to conform to the workplace culture	3.667	3	3
The gender prejudice by men pilots still exists today	3.167	4	3

4.3. Experience on Gender Bias

While the FP participant has experiences flying with woman pilots before, the MP participant does not. The FP commented that the it is normal for her to fly with a woman pilot who is of higher rank to her and she enjoy flying with them. Furthermore, she does not feel that the working atmosphere differ to flying with men.

The FP participant has neither ever encountered a woman flight crew member make a gender related remark towards her, nor experienced a male colleague make a gender related "jokes", but she has experienced passengers making gender related remarks, which are generally positive.

On the other hand, the MP participant believes that female pilots will have the possibility to encounter both a woman flight crew member make a gender related remark towards them, and male colleague make a gender related "jokes". He also has been in a situation when female pilots encountered a woman flight crew member make a gender related remark towards them. The remarks are curiosity on how a woman pilot can maneuver the aircraft during weak physical condition.

4.4. Maternity

Both FP and MP participant agree that balancing the career with the family is not too hard for a woman pilot. The FP further commented that there are no solid privileges that woman pilots can obtain from their organization while taking the maternity leave because there is no such a case that a woman pilot has become pregnant at her organization. Both participants also agree that difficulties for pregnant female pilots are inability to fly during pregnancy and the discontinuity in flying, which would result in recurrent or retraining the instrument rating.

In conclusion, several implications include the recommendation for many relevant parties such as airline authorities, male colleagues, male instructors and cabin crews to acknowledge the equal rights of female pilot. Also, this study reflects that despite the increasing number of women who are interested to work in a cockpit, only few professional vacancies are available for them in Thailand.

5. Limitations

In this investigation, the first limitation is the number of subjects. Due to the scarcity of female professional pilots in Thai context, it might be difficult to generalize the findings into all international context. Another restraint comes from the individuality of the sole male pilot's perspective, which cannot represent all Thai male pilots' perspectives. Also, further research might consider performing exploring research in the longitudinal scales such as for six months or one year to measure the changes in degrees of perspectives towards gender bias in the aviation field.

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