

# **Methodological assessment of the effects of gender interest in aviation job careers**

## **Abstract:**

This phenomenological study aims to identify and describe the educational and social experiences that sparked young female pilots' interest. ladies to seek a vocation in aviation. This qualitative phenomenological study employed semi-structured interviews to investigate the lived experiences of female pilots and to determine whether there were shared social and educational factors that sparked their interest in aviation. This study involved eleven pilots selected through convenience sampling, all of whom possess a Federal Aviation Administration Commercial or Airline Transport Pilot's License. The findings and literature reveal the interconnected relationships between social and educational factors in shaping a girl's future identity. The results showed that a nurturing family and educational environment is the source of the "spark" for aviation.

Key words : pilot life , female pilot , aviation interest

## **Methodology**

This qualitative phenomenological investigation examined the lived experiences of women pilots in professional aviation. The researcher carried out semi-structured interviews with professional female pilots possessing either a commercial or an airline transport pilot's license. Between December 2019 and February 2020, the interviews took place either over the phone or at venues chosen by the participants. The Rev Recorder App was used to record the interviews, after which Rev produced professional transcripts. The data, once transcribed, was coded with the NVivo software program.

## **Sample**

For the study, a sample of 11 female pilots was chosen to take part. Using convenience sampling, a total of 5 Commercial and 6 ATP rated female pilots were selected for interviews, making up the sample of female pilots. Participants were recruited via a post in the Facebook group "Female Aviators Sticking Together" (F.A.S.T.), a collective of skilled female pilots. Those participants who met the study's sample criteria and volunteered for the study were contacted via email or Facebook Messenger to confirm their participation and arrange the interview. Interviews were conducted in person with one local participant, while the others were interviewed over the phone.

## **General findings**

This research examined the lived experiences of 11 women pilots and their views on the social and educational influences that ignited their interest in an aviation career. The research found three primary themes and eighteen subthemes related to the social and educational elements that motivate a girl to aspire to the sky for her future profession. This section presents the findings in relation to the research questions.

### **Pilots Grew up in Locations Where They Were Exposed to Aviation**

In this study, over 54% of the pilots resided in geographic regions where they were exposed to aviation. Some people lived near the commonly used takeoff or landing paths of aircraft, some accompanied their pilot relatives to airports, and others were taken by their parents to see the planes. This regular contact with aviation offers numerous chances to contemplate flying and the significance of being a pilot.

### **Pilots Were Encouraged by Teachers**

According to the literature, teachers significantly affect girls' sense of identity (Heaverlo, Cooper, & Lannan, 2013; Bian & Cimpian, 2017; Microsoft, 2018). This became clear in the answers given by 45% of those interviewed. The study's pilots noted that teachers played a special part in bolstering their confidence, particularly when they encountered social or educational challenges. As children, various pilots involved in this research encountered challenges related to learning disabilities or family issues, yet teachers motivated them to have self-confidence. This support made it more likely that pilots would believe in their potential for success and be open to exploring activities that are not socially conventional.

### **Pilots Participated in Relevant Extracurricular Activities**

More than 80% of the participants engaged in extracurricular activities that were either directly linked to aviation or not traditionally associated with women. In line with the earlier discovery that pilots felt at ease with "tomboy" personality traits, the pilots showed comfort in participating in non-traditional activities. Participation in aviation-related extracurricular activities offered mentorship, peer support, and opportunities for additional exposure. This is consistent with a number of studies that connect the combined social and interest-driven factors in shaping occupational identity and enhancing a sense of empowerment, particularly among underrepresented populations (Tallman, 2011; Kang et al. (2019); der Microsoft-Konzern,

### **Pilots Were Drawn to Hands on Activities**

More than 45% of pilots indicated that they were motivated by hands-on activities during their youth. Numerous participants shared instances of beloved teachers and courses that involved hands-on activities like conducting experiments or constructing objects. Research indicates that hands-on activities in an extracurricular environment significantly increased feelings of empowerment among females (Microsoft, 2018).

### **Complicated Findings:**

## **Most Pilots were not Discouraged From Pursuing Aviation**

An unanticipated discovery is that 90% of the interviewed female pilots mentioned that they were not discouraged in their choice to pursue piloting. Even with decades of being underrepresented and in the context of conventional gender schemas, the majority of pilots could not recall anyone saying that they could not become a pilot. This does not align with historical literature detailing the challenges faced by previous generations of female pilots.

## **Pilots Lacked Confidence as Children**

While it might be assumed that female pilots had above-average self-confidence as children and young women, 90% of them reported the contrary. Pilots, even those who achieved academic success, characterized their academic abilities with terms like "average" or employed dismissive language such as "I guess" or "I was told". Only a single pilot directly claimed she was "above average", without any qualifiers.

## **Action possibilities**

### **Exposure Must Occur During Elementary School**

The literature consistently highlighted the importance of developing gender schemas in relation to age (Bem, 198; Martin & Halverson, 1981; Buschor, Berweger, Fei, & Kappler, 2014; Lindahl, 2007; Perry & Raeburn, 2017). According to Gutterman and Akerman (2008) and Farkas (2016), girls at the age of eight have already begun to form feelings about what constitutes an "appropriate" career field for women. This study found that most of the pilots were first introduced to aviation while in elementary school. Studies indicate that career interests established in elementary school persisted through adolescence (Chambers, Kashefpakdel, Rehill, & Percy, 2018). When introductions are postponed, there is a possibility that they could dissuade women from pursuing piloting careers, as these careers clash with the gender schemas a girl has already formed.

### **Parents Need to Encourage Their Daughters to Reach for the sky**

The findings of this study, corroborated by existing literature, also lead to the conclusion that parents significantly shape their daughters' future outlook. According to the research, parental expectations significantly influence the development of a child's self-concept (Behnke, Piercy, & Diversi, 2004; Whiston & Keller, 2004). By encouraging their daughters to pursue their dreams, parents are removing the idea of a glass ceiling from their daughters' consciousness. When stepping away from conventional social standards, it is essential to be aware that those who hold the most sway in your life back you.

### **Schools Should Focus on Hands on Education**

The research also supports the conclusion that hands-on education is essential for identity development. Even though it is vital, research indicates that only 9% of elementary schools

offered financial support for experiential learning opportunities. Girls are discovering that they can do it through hands-on science experiments. By means of this learning, they are performing the roles of, and thus seeing themselves as, a scientist, doctor, botanist, zookeeper, pilot etc. Experiential learning also dispels conventional stereotypes, including that of the "mad scientist."

### **Society's Definition of "who" can be a Pilot is Changing**

One conclusion that the study's findings support is that societal views on women pilots may be shifting. Historical literature indicates that women pilots encountered discrimination from various sources. Nonetheless, the vast majority of pilots involved in this research could not recall anyone advising them against becoming a pilot. Of significant note, however, is that the pilot who faced outward discrimination was African American. This indicates the potential this pilot had to surmount various obstacles on her path to becoming a pilot.

### **Gender Schemas are Relevant in the Development of Personality**

The importance of gender schemas in the lives of girls and young women is demonstrated by both research and literature. It is improbable that girls who are pressured to act in a very feminine way, or "girly girls," will opt for a non-traditional career. They will avoid extracurricular activities, educational environments, and any other elements they have categorized as "for boys". Girls who do not conform to societal expectations of femininity, often referred to as "tomboys," are significantly more likely to stray from conventional gendered career paths. They will take into account all extracurricular activities, educational environments, and any other factors, without questioning whether they are "appropriate" for girls.

### **Social Media's Role in Influencing Children is Significant**

Many of the pilots in this research were inspired by watching pilots on TV or in films. It has also been documented that the media plays an important role in exposure to careers, with children frequently learning about career options via social media or television (Chambers et al., 2018). Nearly every child, from the moment they could hold an iPhone or an iPad, has had media presented to them on a daily basis. Research indicates that children aged 8-10 spend an average of six hours daily in front of electronic media, highlighting the impact of platforms like YouTube, Instagram, and other social media on their self-identity formation (CDC, 2017). Recent studies indicate that social media is rapidly taking over as the primary influencer of young children, surpassing parents.

### **Implications for Action**

The following recommended actions are based on the study's results and a comprehensive literature review.

- All individuals involved in aviation should take on the role of mentors. It is important for girls to be shown aviation by anyone willing to do so. Parents, siblings, and other relatives who work as pilots should take part in school career days.

• It is important to offer girls the chance to join clubs and activities in elementary school that promote an enthusiasm for science, aviation, and technology. Aviation organizations in the area should collaborate with school districts to form partnerships.

• It is necessary for professional aviation organizations to engage in elementary education. It is essential for those who will make up the future workforce to understand who and what they can become in aviation. As major airlines report record profits, it is essential to invest in the future of the industry.

• The marketing of aviation to children needs a rebranding, shifting away from the field's "machoness" and instead emphasizing its social and service-oriented aspects. It is important for girls to see other female aviators represented in print and media.

• There is a need for career counselors in elementary schools. Unless potential career options are introduced to children before they reach high school (and even middle school), gender-specific career fields will continue to exist. Once a child reaches middle school, their perception of what career fields are acceptable for them has become entrenched and is hard to alter.

• There should be more training for teachers on ways to foster confidence in their students, particularly those who are facing academic or social challenges.

• It is essential for parents to grasp the importance of their unwavering support. Though it may appear self-evident, it is crucial for parents to grasp the importance of their communication and interaction style with their children. School districts and advocacy groups should handle the distribution of literature and other resources.

• Recommendations for Further Research Based on the study's findings and conclusions, the following recommendations were made for further research

• A replication study concentrating on female private pilots (in sports, recreation, and as students).

• A replication study that centers on minority pilots. Women from minority groups continue to be markedly underrepresented in the aviation industry and probably encounter extra societal obstacles on their path to the flight deck.

• A replication study concentrating on boys and young men to ascertain whether differences exist in how the spark for aviation was ignited.

• Additional studies regarding the absence of self-assurance or "imposter syndrome" in female pilots.

## **Concluding Remarks and Reflections**

The Merriam-Webster dictionary defines "spark" as "to kindle, animate, or stimulate interest, activity, or spirit." For me, the 11 women interviewed in this study, the thousands before us, and the thousands yet to come, something has ignited an interest in aviation. But, just like with most

“sparks”, you need the right surroundings to transform that spark into a flame. This study makes it evident that the environment comprises numerous factors, such as early exposure to aviation, parents who provide encouragement for their daughters' ambitions, and educators who foster self-belief and confidence in girls., and a personality type that does not worry about the gender labels society assigns to her. Remove any of these elements, and the spark is extinguished; this leads to a global shortage of pilots, a mere single-digit representation of female pilots, and little girls who are satisfied with remaining on the ground.

You possess the present condition of aviation. I have two daughters who are at a crucial stage in their identity development, and I see that my impact on who they will become is rapidly nearing its conclusion. This study has led me to alter how I discuss academics, friendships, and goals with them. I am trying to expose them to as many things as possible, wondering if the podcast we listen to about antibiotics will inspire them to pursue careers in science, if the flights we take will motivate them to become pilots, or if my support during challenging math assignments will help them stay connected to STEM despite their struggles with self-doubt.

Throughout my years in aviation, I have frequently been the sole woman on the flight deck or in meetings. However, I believe that my daughters will encounter a much different environment if they choose to enter the aviation industry. Society is evolving, although at a gradual pace. Women are equally represented in the workforce alongside men, and perceptions of these women are evolving. Long-established traditions fade away, and new standards arise. Drawing from the insights of the 11 remarkable women interviewed for this study, I sense that the new norm is shifting towards equity on the flight deck.

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