

EMPLOYABILITY TREND OF AVIATION GRADUATES IN MALAYSIA: PRE- AND POST-COVID-19

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Abstract: At the pinnacle of the COVID-19 pandemic, aviation graduates faced substantial setbacks as numerous aviation companies were compelled to downsize their workforce due to heightened financial pressures. Notably, graduates from the class of 2020 encountered the need to pivot towards alternative fields, whether related to engineering or not, in their pursuit of employment. During this period, the efficacy of Universiti Kuala Lumpur – Malaysian Institute of Aviation Technology (UniKL MIAT) as a teaching factory initiatives was scrutinized, which was aimed to assess their practicality in mitigating the employment crisis amid the pandemic's turmoil. Nevertheless, a noticeable shift has emerged in the trajectory of aviation graduate employment as the years progressed beyond 2020. By 2021 and 2022, the sector has displayed encouraging signs of recovery. The year 2022 has witnessed significant upsurge in number of graduates successfully securing positions within the aviation industry. This phenomenon suggests two important aspects. Firstly, aviation companies are evidently ramping up their recruitment efforts to address the workforce gaps created by the measures taken to downsize during the pandemic. Secondly, the furloughed staff appears to be reluctant to rejoin the workforce, thereby creating avenue for young talents to commence their careers within the aviation sector.

Keywords: graduate employability; aviation; teaching factory; MRO; training

1. Introduction

The rapid onset and the subsequent widespread transmission of the COVID-19 pandemic have profoundly impacted many businesses. For instance, the hospitality industry, which is depending heavily on tourists and travelers, has been greatly disrupted. The effect of that leads to adverse consequences for the performance of hotels [1]. The healthcare landscape has also undergone a major transformation due to the pandemic, leading to a fresh set of obstacles that the healthcare workers have to navigate in both their professional and social spheres [2]. Furthermore, the food industries alike are also vulnerable and impacted by the profound consequences of the coronavirus pandemic as the societies practice new norms [3]. Safeguarding food safety and mitigating the transmission of the virus in the food service and retail sector has emerged as a significant challenge. This is particularly critical as this sector deals with the handling and delivery of perishable and delicate food items. These items undergo a series of crucial operational procedures, including order taking, food receiving, food preparation, packaging and delivery to customers. Fortunately, the rigid procedures and operation undertaken during the COVID days have slowly been released and uplifted as the situation gets better.

In different perspective, aviation industry is among the primary sectors that have had a devastating impact due to COVID-19, causing unprecedented disruptions and challenges. The furlough of aviation workers has been one of the most distressing consequences of the pandemic's impact on the aviation

industry. As travel demands plummeted and most airlines faced a significant financial strain, they were compelled to take drastic cost-cutting measures to survive. During the height of the pandemic, airlines had to ground substantial portion of their fleets and suspend numerous flights due to travel restrictions and border closures. As a result, the need for a full workforce diminished significantly. Many airlines had to furlough pilots, flight attendants, ground staff, maintenance crews and some other operational personnel as they could not sustain their regular workforce due to drastically reduced flight schedules [4]-[6]. The situation has also profoundly impacted the broader aviation ecosystem, including airports, aircraft manufacturers and travel-related businesses. In a 2020 report by the International Civil Aviation Organization (ICAO), there is steep decline in global air travel with a significant drop of 60% compared to the previous year 2019, which is highlighted in Figure 1. This sharp decrease equated to about 2,703 million passengers who would have travelled in 2020 if the pandemic had not occurred. The impact of this decline was substantial, with airlines suffering a staggering loss of approximately USD 273 billion in 2020 [7].

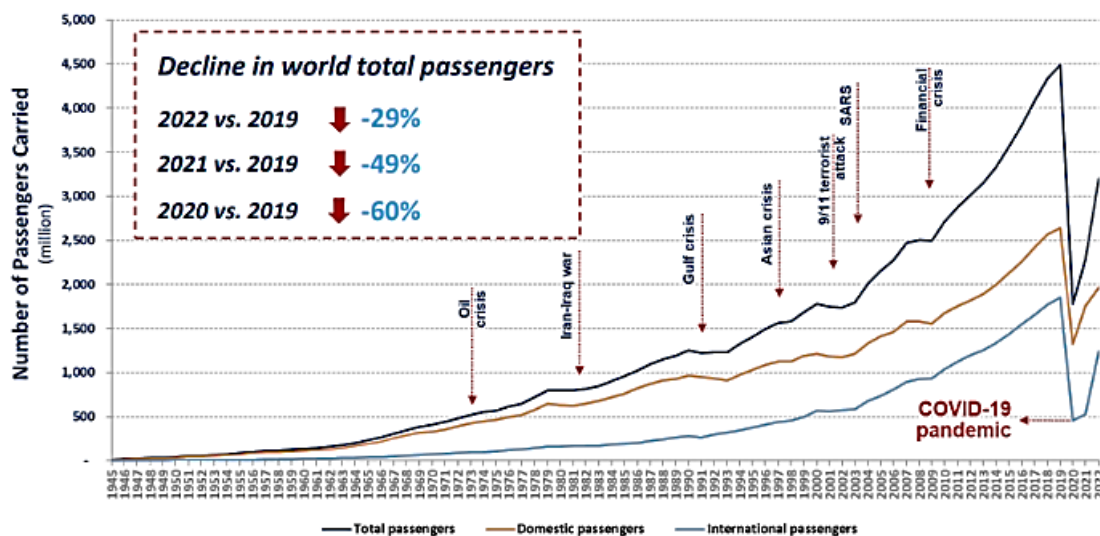


Figure 1: World traffic evolution between years 1945 to 2022 [7]

According to recent report by Malaysian Aviation Commission (MAVCOM), Malaysia’s passenger traffic has experienced a significant recovery in 2022, reaching 54.8 million passengers compared to 11 million in 2021, showing an impressive year-on-year growth rate of 399% as depicted in Figure 2. This remarkable rebound in the aviation industry can be attributed to the government of Malaysia’s decision to open borders and lift the movement control order towards the end of 2021. The easing of the travel restrictions, combined with increased vaccination efforts and restored confidence in travel, contributed to this sharp increase in passenger traffic [8]. In general, the aviation industry’s strong recovery in 2022 has demonstrated its resilience in overcoming the challenges posed by the pandemic.

However, despite the forecast of continued growth in 2023 with estimated passenger traffic ranging between 74.6 to 80.8 million, it still falls short compared to pre-pandemic level in 2019, which recorded about 109.3 million passengers. The growth of aviation industry in 2023 is impeded by several factors and among these hindering factors, the lack of staffing has been a significant issue [9]. The airlines have faced challenges rebuilding their workforce after substantial staff reductions during the pandemic. Re-employing laid-off staff has proven to be difficult, further exacerbating staffing shortage. Additionally, the Maintenance, Repair and Overhaul (MRO) industry also suffers from the shortage of maintenance manpower. As a result, airlines encounter difficulties returning aircraft to service after extended parking periods during the pandemic. These grounded planes require extensive maintenance checks but the lack of skilled personnel in the MRO industry slows down the process. Furthermore, the global geo-political

tensions have added to the slowdown in the aviation sector's growth in 2023. These tensions have had an adverse impact on the industry's supply chain, creating disruptions and uncertainties that hinder its recovery and expansion.

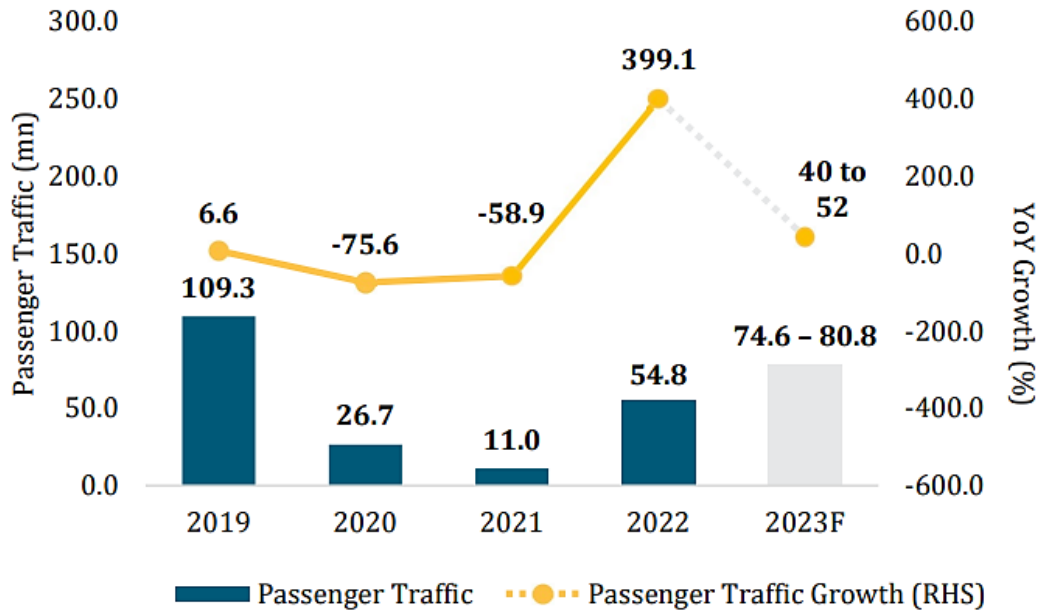


Figure 2: Malaysia passenger traffic 2019 – 2023 (forecast) [8]

In a broader context, the COVID-19 pandemic has brought significant vulnerabilities across nearly every global industry to the forefront, exposing both their structural weaknesses and also the fragility of employment. The worldwide income landscape bore the brunt of COVID-19 and the subsequent 2020 economic crisis has resulted in the substantial rise in unemployment rates [10]. Implementing the movement control orders (MCOs) by different nations has led to workforce reductions and operational cutbacks, exacerbating the financial turmoil [11]. Various enterprises and industry leaders responded by requesting unpaid leaves and layoffs to curtail operational costs and weather the pandemic's impact on their businesses [12]. This situation has endangered economic upheaval in Malaysia and escalated the vulnerability of recent graduates to unemployment risks [10]. Furthermore, the pandemic added a layer of complexity for university graduates aiming to secure positions in their respective fields.

At the same time, the shrinking of aviation job market has significantly impacted aviation graduates seeking employment. The situation could well be exacerbated by the large pool of experienced aviation workers who already furloughed, seeking re-employment when the industry began recovering [13]. This competition sometimes disadvantages fresh graduates, as employers might prioritize skilled workers to minimize training and transition time. On the other hand, it could also be a blessing and an opportunity for aviation graduates if those furloughed show a reluctance to return to service for personal reasons. Universities offering aviation are also affected as they need to provide means for graduates to cope with the career shock that comes with it. The graduate employability study is thus vital for the industry and university in adapting the program accordingly to provide good service in facing the challenges in the industry. This study will investigate the trend in aviation graduate employability during the COVID-19 pandemic and its recovery phase. Using the graduate employability data that has been released by the Ministry of Higher Education Malaysia, the study will investigate the graduates' field of employability in six months after graduation. This analysis might reveal whether any specific areas within the aviation industry have experienced more significant changes in employment opportunities compared to others.

2. Methodology

The data utilized in this study has undergone analysis, drawn from the graduate tracer study survey participated by graduates from Universiti Kuala Lumpur – Malaysian Institute of Aviation Technology (UniKL MIAT). It should be noted that MOHE Graduates Tracer Study is a survey conducted by the Malaysian Ministry of Higher Education among graduates of higher learning institutions in conjunction with their convocation ceremonies for the purpose of knowing their job status and also for getting their feedback on various aspects of their institutions. The employability rate attributed to the institution’s graduates includes those engaged in work, pursuing further education, undergoing training or upskilling, and those awaiting job placement.

UniKL MIAT, Malaysia’s premiere technical aviation institute, offers a diverse range of aviation-related educational program encompassing diplomas, bachelor’s degrees and also postgraduate degrees. In terms of diploma offerings, the institute provides programs like Diploma of Engineering Technology in Aircraft, Diploma of Engineering Technology in Avionics and Diploma of Engineering Technology in Helicopter. For those pursuing bachelor’s degrees, available options include the Bachelor of Aircraft Engineering Technology (Hons.), Bachelor of Aircraft Engineering Technology (Hons.) in Avionics and Bachelor of Aviation Management (Hons.). The postgraduate realm includes Master of Engineering Technology (Aerospace) and Doctor of Philosophy (Aerospace) programs. Additionally, UniKL MIAT facilitates Professional Certificate (Aircraft Maintenance License Program – EASA Part 66), ensuring graduates are equipped for careers spanning Aircraft Maintenance and Repair, Aviation Management, and various other professions within the aviation domain.

To scrutinize the trajectory of graduate employability for UniKL MIAT students during and after the COVID-19 pandemic, data spanning from 2019 to 2022 is examined. Table 1 displays the count of respondents or graduates from UniKL MIAT who have participated in the tracer study. Only diploma and bachelor’s degree graduates’ responses are included in this study for practical purposes. On average, approximately 687 respondents participated in the survey, with 2021 and 2020 highlighting notably high numbers of participants at 730 and 721, respectively. The response rate is 99.1% for the four years (i.e. 2019 to 2022) included for this study. For each year under examination, the graduates’ employability is dissected based on their current status at time of the survey: being employed, pursuing further studies, undergoing training or awaiting job placement.

Table 1: UniKL MIAT graduate tracer study respondents

Year	Respondents	Graduating Students
2019	639	653
2020	721	725
2021	730	733
2022	656	659

In the meantime, Figure 3 shows the employability status of UniKL MIAT students from 2019 to 2022. The graph highlights that employability status within the “employed” and “furthering studies” categories are dominant trends across the four years. However, it should be noted that this study’s main focus rests on analyzing employed graduates, with plans for future research directed towards the other employability categories.

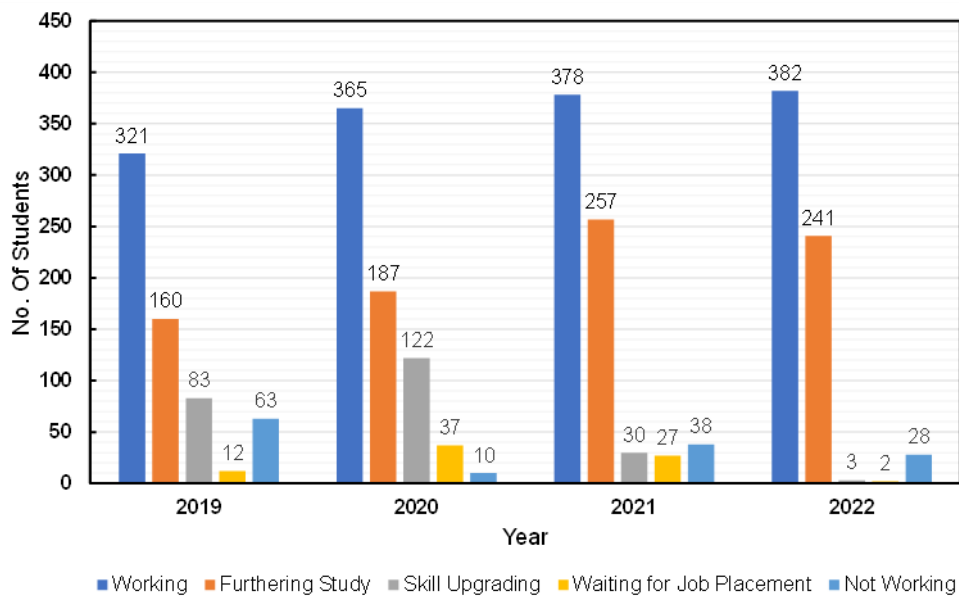


Figure 3: Students graduate employability status

3. Results and Discussion

Graduates holding employment status have consistently demonstrated an upward trend, with an average of 362 graduates securing employment in the six months' post-completion of their studies. The research additionally delves into the employment sectors of this working graduate group, categorized into three major segments: aviation, engineering-related and others. Figure 4 reveals that in year 2020, coinciding with the initial impact of COVID-19, the number of graduates employed in aviation sector has experienced substantial decline compared to the previous year, 2019, representing only 19% of the employed graduates. Amid the continued global economic strain in 2020, 40% and 41% of employed graduates managed to secure roles in engineering-related fields and other industries beyond the aviation and engineering, respectively. Meanwhile, year 2021 has shown even distribution of graduates employed across the three fields mentioned above as shown in Figure 4. While there is 12% increase in percentage of graduates employed by aviation companies in 2021, this percentage remains lower than that in 2019. The surge may be attributed to governmental initiatives in Malaysia permitting specific critical sectors, including aviation, to resume operations. Aviation companies proactively prepared their workforce with the anticipation of increased air travel demands following the easing of the movement control order (MCO) in November 2021 [14]. Nevertheless, the discovery of several new COVID-19 variants in 2021 has instilled uncertainty, leading aviation companies to tread cautiously in expanding their workforce due to concerns about managing personnel costs.

Post-COVID-19, in 2022, the employability rate for graduates seeking employment in the aviation industry has experienced a sharp increase. Notably, 56% of employed graduates secured positions with aviation-related companies. This remarkable 25% growth, compared to the previous year 2021, mirrors the trend observed in Figure 2, which indicates an upswing in the air travel demands in Malaysia. The announcement by the Malaysian government regarding the shift from pandemic to endemic measures instilled confidence, prompting companies to recruit and enhance operations to pre-pandemic levels. The concerns raised regarding the reluctance of the furloughed staff to return to service underscore the opportunity for newly graduated aviation professionals to fill the void left by staff layoffs resulting from the pandemic-related measures.

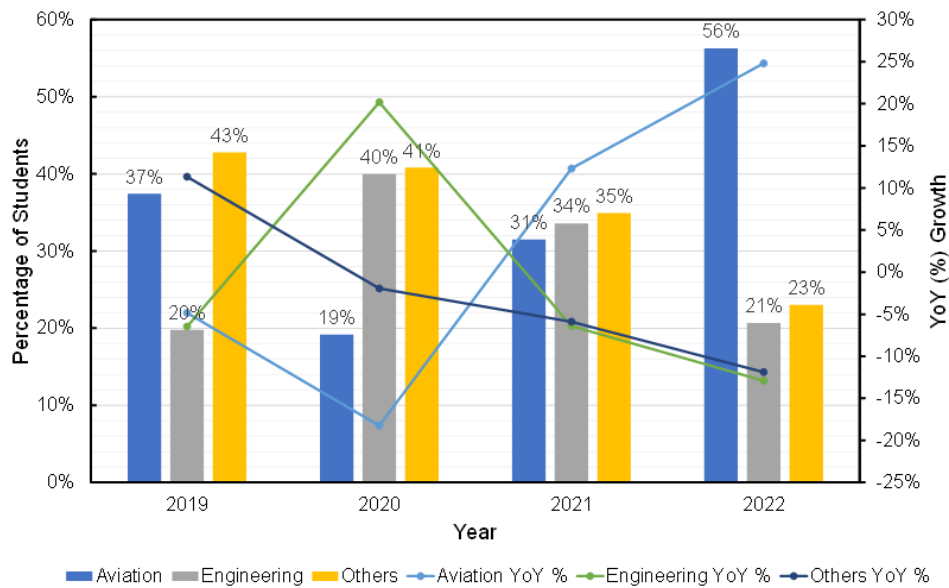


Figure 4: Graduate field of employment

UniKL MIAT has distinguished itself through its innovative Teaching Factory concept, which has been introduced in 2011. This concept is a mutually beneficial strategy that involves close collaboration with industry partners operating within UniKL MIAT’s premises. The approach fosters an environment where students and staff gain invaluable exposure to real-world aircraft industry settings and can engage in hands-on aircraft maintenance activities. Simultaneously, participating companies reap advantages such as financial benefits, reduced rental expenses and a consistent source of skilled human resources to support their operational needs. As indicated in Figure 5, particularly during the peak of the COVID-19 pandemic in 2020, UniKL MIAT’s Teaching Factory partners played a significant role in alleviating the employment crisis. Notably, 21% of the total aviation industry workforce employed that year have been sourced from the UniKL MIAT’s Teaching Factory companies. This statistic could be taken to underscore the effectiveness and also sustainability of this collaborative model, even during challenging periods that have been marked by economic uncertainty. The data demonstrates that such partnerships continue to thrive and provide valuable employment opportunities in both favorable and also adverse conditions. This signifies the resilience and adaptability of the Teaching Factory concept in maintaining a steady supply of skilled professionals and contributing positively to the aviation industry’s workforce dynamics.

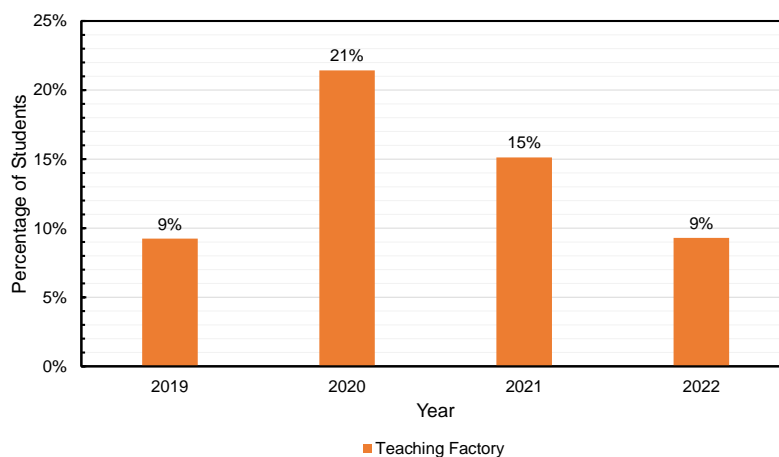


Figure 5: Job employment opportunities provided by the Teaching Factory

4. Conclusion

The aviation industry is currently experiencing an encouraging growth trajectory, accompanied by rising demand for jobs across various sectors within the industry. This positive trend bodes well for the young aviation graduates as it presents them with improved employment prospects. In order to sustain and amplify this growth in Malaysia, it is imperative to continually nurture a pool of skilled professionals to meet industry demands. Achieving this necessitates a collaborative effort between the government, universities and industry to establish a robust and sustainable framework that benefits all stakeholders involved. The Teaching Factory concept has demonstrated effectiveness, particularly during challenging times, which is emphasizing its value. This success underscores the potential for government to expand further and enhance this concept, thereby cultivating a self-sustaining ecosystem conducive to fostering industries, particularly those of high value such as aerospace. Despite the positive trajectory observed in industry growth and graduate employability within the sector, attention now shifts to critical aspect of supplying the necessary human capital to support the industry's expansion. The pandemic has cast a shadow on the industry's image, triggering big concerns about job security due to the substantial layoffs witnessed during the peak of the crisis. Such perception of instability has become the challenge for the aviation industry's human resource supply. The forthcoming future research work will delve into this very challenge, focusing on topic of human capital supply within aviation industry and the implications of the pandemic-induced shifts in job security perception.

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