

DIGITAL COMPETENCIES FOR FUTURE AIRLINE INDUSTRY PROFESSIONALS

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Abstract.

The airline industry has experienced significant transformation over the past few decades, largely driven by advancements in digital technologies. The increasing reliance on digitalization has revolutionized how airlines operate, interact with customers, and manage their businesses. This research paper explores the importance of digital competencies in the context of the airline industry and their implications for future professionals in the field. With the rapid advancement of technology, digitalization has become a crucial factor in shaping the aviation sector. The paper highlights the specific digital competencies that airline industry professionals need to develop to thrive in an increasingly digital environment. This paper also discusses the benefits and challenges associated with enhancing digital competencies and proposes strategies for integrating digital skills into training and education programs for aspiring airline industry professionals.

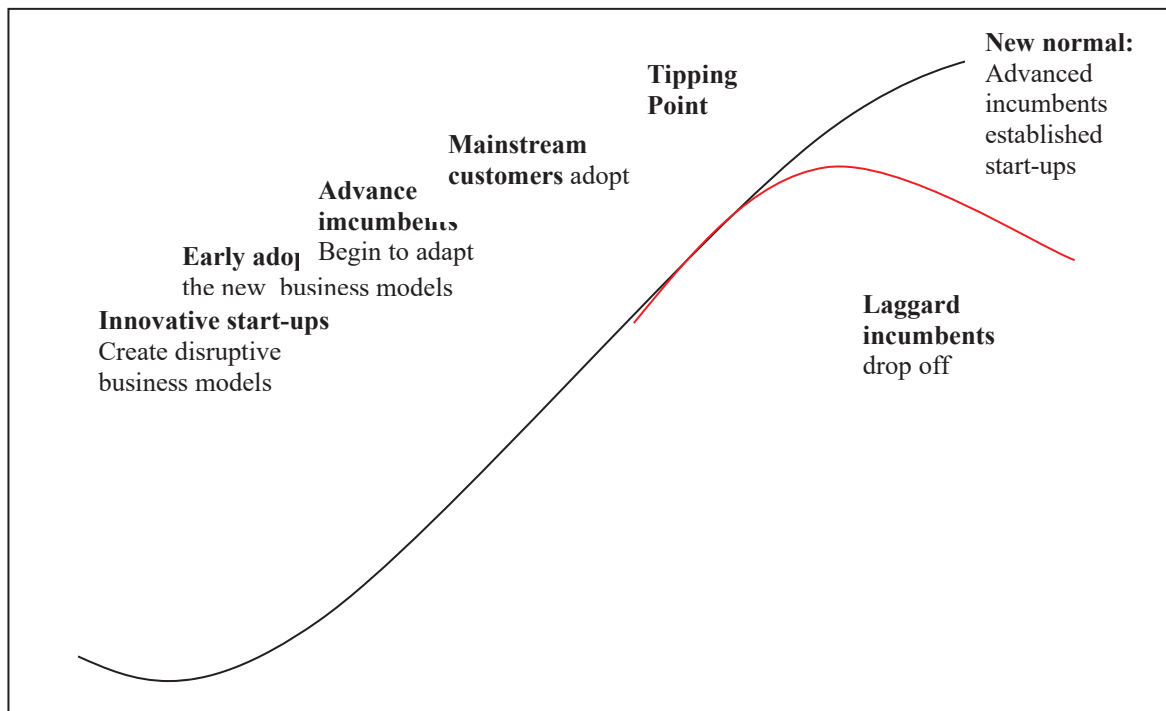
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Introduction

It is widely acknowledged that digitization is a powerful force that is reshaping numerous industries, including corporate operations, consumer interactions, and innovation. It continues to reshape industries, economies, and societies worldwide. Catlin, T., Scanlan, J., & Willmott, P. (2015) stated that the pace of technological advancement is rapid, and businesses that embrace digital transformation and stay agile are more likely to thrive in this dynamic landscape. Moreover, digitization decreases entrance barriers, therefore it leads an additional users to join the network as it is typical for new market entrants to scale up more quickly and economically than traditional competitors.

Figure 1: How digitization transforms industries



Source: Adapted from M. Hirt & Willmott, P. (2014).

This scenario may seem familiar to many leaders, looking back to the terrifying days of the first wave of Internet competitors 20 years ago. Many incumbents efficiently responded to these dangers, some of them vanished with the dot-com catastrophe. The challenge we face now are scaling up at an unbelievable rate. Moreover, Tansiria, E et, al. (2023), the COVID-19 pandemic accelerated the adoption of remote work and collaboration tools. Video conferencing, project management software, and virtual collaboration platforms have become essential for businesses to maintain productivity and connectivity. Industries like healthcare, education, finance, and manufacturing and airline industry are undergoing significant digital transformation to improve efficiency, accessibility, and customer experience. According to Rauser (2016), The digital strategy refers to the strategy a company would apply to all of its digital initiatives. Bharadwaj et, al. (2013), in business, a digital strategy is an organizational plan developed and carried out using digital resources to provide value differently. As for the airline industry, nowadays, many people prefer to travel by air because it is a quick and comfortable means of transportation, it enabling the passenger to use the service widely. As a result, the aviation industry has grown at all levels. However, Krungsri Research (2023), the outbreak of the COVID-19 virus in 2020 and 2021, a severe impact causing the global airline business to operate at a loss. From the travel restriction policy, closing the borders of many countries to contain the spread and so on. The International Air Transport Association (International Air Transport Association: IATA) indicated that in 2021, the global airline business has a loss of 42 billion US dollars. Following a loss of US\$138 billion in 2020, for 2022 the airline business gradually recovers from a global vaccination. As a result, almost all countries gradually lifted international travel control measures. However, the recovery of the airline business was aggravated by the situation of the Russo-Ukrainian war that started in the first quarter of 2022 and has continued until now. Resulting in higher energy prices and global inflation at an accelerating rate affecting many countries around the world. In 2022, IATA indicated the number of passengers worldwide to reach 3.4 billion, an increase of 83% from 2021, while transport volumes, cargo will rise to 60.3 million tonnes, close to 61.3 million tonnes in 2019, with the airline loss dropping to US\$6.9 billion from US\$42 billion a year earlier. For the Thai airline business in 2022, there is a sign of recovery, in line with the direction of airlines around the world, which is

from (1) the government achieved the goal of 100 million doses of the COVID-19 vaccination or covering more than 70% of the population. Since December 2021, this has resulted in a decrease in the infection rate (as of September 2022 at 143.2 million doses), causing the government to gradually relax epidemic prevention measures in early 2022 and gradually open the country to receive foreign tourists in full capacity. (2) the measures to stimulate the tourism sector, both Thai travelers (e.g., the 4th We Travel Together project) and foreigners (e.g., periodically reducing the cost of traveling to Thailand). (3) Thai economy continued to recover, expanding by 2.6%, accelerating from 1.5% in 2021, and (4) the baht per US dollar depreciating by 12% from 2021, the highest in 16 years (as of September 28), encouraging foreign tourists to travel to Thailand. The above factors resulted in a significant increase in both domestic and international passengers returning to travel. As the airline increases the number of flights and continuously expands both domestic and international routes. The number of flights increased at 121.1% YoY (570,000 flights), in line with an increase in passenger numbers, compared to 260,000 flights in 2021, with domestic flights increased at 111.1% YoY (390,000 flights). Airlines gradually open almost all routes. Meanwhile, international flights increased at 147.1% YoY (at 180,000 flights), partly due to the gradual cancellation of government measures such as Test & Go for all vaccinations. Together with Thailand Pass for Thai nationals and the full opening of the country in July, causing airlines to gradually open international routes and increase flight frequency to support the increasing demand of foreign tourists to travel to Thailand. In addition, many Asian countries are gradually accepting tourists without quarantine, such as Japan and South Korea. As the growth of the aviation industry at the international level plays an important role in Thailand, therefore, Airline Business leaders must rethink upskilling, embrace flexibility, and deliver on purpose-driven work in order to foster trust and adapt to the changing dynamics of their workforce. Digital competency is important for individuals of all ages and across various domains, including education, business, government, healthcare, and personal life. In airline industry, digital competency is increasingly emphasized as a key component of 21st-century skills, as it prepares individuals for future careers which require digital literacy and technological proficiency.

Theoretical and Analysis

Digital outlook

The corporate world is undergoing a significant change due to digital business transformation, which affects not just operations but also all industry structures and all organizational levels. If businesses decide to move toward digital business across the board, there are numerous options. According to Agrawal, De Smet, Lacroix, & Reich (2020) mentioned that a pharmaceutical business with more than 10,000 employees shifted to 100% remote working. The business will eventually switch to a 30% offline and 70% online business strategy. In addition, the McKinsey Global Institute survey found that 375 million workers worldwide are interested in changing careers or acquire new skills as a consequence of technology advancements that have given rise to automation and artificial intelligence. The survey also foresees future developments, such as the distance economy, which uses digitalization to avoid face-to-face encounters, customers using e-commerce more frequently, and digital talent-marketplace platforms among businesses for talent exchange. In order to quickly supply digital resources, the company should develop digital training programs. Another example of using digital technology in pandemic management is the Taiwanese government's integration of the immigration and customs database to produce big data for analytics and to track quarantine via mobile phone during the quarantine period in real time, according to Yourex-West (2020). In fact, companies like Google and Facebook are gathering user data and are able to forecast what an individual may enjoy or engage with subsequently. The McKinsey survey, however, showed that some leaders struggle with how they should handle with the upskilling and reskilling associated with their workforces. However, McGregor & Doshi (2020) stated that people will lose motivation if they work from home. Considering that they will no longer have a social working environment. People in particular dread losing their jobs during the pandemic era. In addition to Dawson, (2003), A learning organization and knowledge management are examples of modern management activities that involve change M. Hirt & Willmott, P. (2014)

identify a few methods employed in their research that will aid businesses in their decision-making about the implementation of digitalization. Taylor (1911) investigated human physical activity and drive to identify the most effective means of increasing results. Taylor divided the task into the "division of labour" component. According to Gulik and Urwick (1937), the task's logical arrangement, coordination, centralization, and rules were key factors in the managerial values. As a result, they suggested the POSDCORB management model, which consists of the processes of planning, organizational management, human resources, directing, coordinating, and reporting.

Airline Professional Digital Competency

At the time of the rise of digital technology, it is transforming the way airlines operate and interact with their customers. The rapid advancements in technology, including the internet, mobile devices, data analytics, artificial intelligence, and cloud computing, have opened up new possibilities for airlines to enhance their operations and offerings. Vanpetch, P., & Ostovskaya, A. (2020), The rise of digital-native companies and new business models has disrupted the traditional industry. It is challenging established players, driving them to embrace digitalization to stay relevant and competitive. This is in accordance with The Ministry of Industry (Thailand) (2017) announced the issue on Small and Medium Enterprise SME Revolution, which defined SME 4.0 as an industry that became digital by using technology to connect, control, and improve machine communication with one another. Airlines digitalization is transforming the standards of competition, currently, there are many issues to concern in airline industry such as an Advancement in Technology: The rapid advancements in technology, including the internet, mobile devices, data analytics, artificial intelligence, and cloud computing, have opened up new possibilities for airlines to enhance their operations and offerings, Changing Consumer Expectations: Modern travelers expect a seamless and personalized travel experience, Digitalization allows airlines to meet these expectations by providing convenient online booking, mobile check-in, personalized offers, and real-time updates. Industry Competition: The airline industry is highly competitive, and digitalization has become a differentiator among airlines. Those that embrace and implement digital solutions effectively gain a competitive edge. Operational Efficiency: Digitalization offers opportunities to streamline processes, automate tasks, and optimize resource allocation, leading to increased efficiency and cost savings. Data Abundance: Airlines generate vast amounts of data related to flight operations, customer behavior, maintenance, and more. Digitalization enables the harnessing of this data to gain valuable insights and make data-driven decisions. Therefore, future airline industry professionals will need to possess a range of digital competencies to thrive in this dynamic environment. Implementing digital skills effectively within an organization requires strong leadership and a strategic approach. Kankaew K. et, al. (2020) stated digital competency refers to an individual's ability to effectively and efficiently use digital technologies and tools to achieve desired outcomes in various contexts. It encompasses a range of skills, knowledge, and attitudes necessary to navigate and participate in the digital world. Digital competency is essential in today's society, where technology is integrated into many aspects of our personal and professional lives. In accordance with Charemnit, K. (2021), an essential digital competency for future airline industry professionals can be utilized for staff training, enhancing in-flight entertainment, and providing virtual tours of aircraft and destinations as well as the increasing prevalence of mobile devices, e-commerce, and mobile payment solutions, therefore, airline professionals should be skilled in optimizing digital payment systems and ensuring smooth online transactions. Proficiency in these technologies can add value to the airline's offerings. Moreover, Paethrangsi, N., & Jamjumrus, T. (2021) identified a change-oriented leader should have a clear vision, optimism, an open mind to new information, the ability to solve problems, inspire, and engage in organizational transformation. The digitalized leader should also be technically adept, able to import and comprehend crucial data, and strategic. According to Ekambaram et al. (2018), The 5Vs—value data, velocity, veracity, variety of data and sources, and volume—are the characteristics of data flow in the big data era, Consequently, the leader in the digital economy should support their subordinates to learn and use technology for organization purpose in a constructive manner. That is the capacity to objectively combine the human brain with AI mechanisms, therefore, business can continue growing successfully.

Conclusion

Digital transformation has the potential to revolutionize industries by enhancing efficiency, improving customer experiences, driving innovation, and enabling businesses to thrive in an increasingly interconnected and technology-driven world. Embracing digital technologies and adapting to the changing landscape is essential for companies looking to remain competitive and future-proof their operations. Companies that choose to quickly adjust to the new reality may take tremendous chances, while those that remain with the old status paradigm and ignore these advantages are having trouble staying on the market. In the meantime, the airline industry is evolving rapidly, and the rise of digital technology is transforming the way airlines operate and interact with their customers. As a result, future airline industry professionals will need to possess a range of digital competencies to thrive in this dynamic environment. The digitalization process is the only choice for survival in the present and the years to come. Currently, the world is in the digital age that is changing human behavior to a new normal, business models are reshaping, currencies have the potential to become digital currencies, Data and information grow rapidly. As well as artificial Intelligence (AI) and Machine Learning: AI and machine learning technologies play a crucial role in optimizing airline operations, from predictive maintenance to dynamic pricing. Hoy and Miskel, (2005) stated that in situations where Y2K and worldwide trade have an impact on company, computers play a crucial role. Organizations from both public and private sectors have deployed networking, alliances, and successful strategies. In order to survive in the digital age, the organization's leader must be trained and need to understand how to leverage AI algorithms to enhance processes and provide personalized customer experiences. Organization leader must be prepared to face the digital age. Referred to Charernnit, K. (2021), organization leader must be prepared to face the digital age in following area, Digital Marketing: is crucial for airlines to attract and retain customers. Airline Professionals should be well-versed in digital marketing strategies, social media engagement, content creation, and online advertising to reach the target audience effectively. Customer Experience Enhancement: Digital tools, such as chatbots and virtual assistants, are becoming prevalent in improving customer experiences. Future airline industry professionals should be familiar with these technologies and use them to provide efficient customer support and personalized services. Cybersecurity Awareness: As airlines increasingly rely on digital systems and data, the risk of cyber threats grows. Professionals must be trained in cybersecurity best practices to safeguard sensitive information and protect against potential attacks. Internet of Things (IoT) Integration: The IoT allows for real-time tracking and monitoring of aircraft, cabin systems, and even passengers' needs. Familiarity with IoT technology is vital for professionals to implement innovative solutions and ensure a seamless travel experience. Blockchain Technology: Blockchain can enhance various airline operations, such as secure ticketing, loyalty programs, and supply chain management. Understanding blockchain's potential benefits will be advantageous for professionals in the industry. E-commerce and Mobile Payment: airline professionals should be proficient at streamlining online transactions and optimizing digital payment systems. Data Privacy and Compliance: With new regulations like the General Data Protection Regulation (GDPR), airline professionals must ensure compliance with data privacy laws and protect passengers' personal information. These digital competencies are not only essential for future airline industry professionals but also reflect broader trends in the job market across various sectors. By staying updated with technological advancements and continuously improving their digital skills, professionals can stay competitive and contribute to the success of their organizations in the rapidly evolving airline industry. The researcher recommends to human resource for every airline to establish the guideline development for all level including Classroom Training, Virtual Training, Coach & Mentor, and assignments. This is to ensure that the executives and employees are ready to perform their tasks assigned based on their current and future position levels, and also ready to be appointed for any position in a higher level.

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