DIGITAL LITERACY OF THE AVIATION LABOUR FORCE IN EASTERN ECONOMIC CORRIDOR

Sariyapa Kantawan

A Dissertation Submitted in Partial
Fulfillment of the Requirements for the Degree of
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ABSTRACT

Title of Dissertation	DIGITAL LITERACY OF THE AVIATION LABOUR FORCE IN EASTERN ECONOMIC CORRIDOR
Author	Miss Sariyapa Kantawan
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The study was a mixed-method of both qualitative and quantitative research, aimed 1) to study the current condition of the aviation industry in Eastern Economic Corridor 2) to analyse the main factors that affect the digital literacy of the aviation labour forces and 3) to find the correlation of the main factors that affect the digital literacy of the aviation labour forces. The research was conducted into two parts. Part 1: Qualitative research was conducted by descriptive research methodology, which was conducted by using literature reviews and in-depth interviews of the aviation industry labour forces. Part 2: Quantitative research was conducted by a one-shot descriptive study to examine the correlation of the factors towards those of the aviation industry labour forces.

The results were found that U-Tapao Rayong-Pattaya International Airport is a strategic location. It is appropriated for the aviation industry of the region not only for the security but for the commercial events as well. The characteristics of the population revealed that the major group was male over 45 years old, married, got a bachelor degree, government operators in engineering departments, fair English skills, 15,000-25,000 baht per month, and over 5 years experiences in the aviation industry. The majority of the respondents spent their time for the digital media 4-6 hours a day for daily news. They used their smart phones during their operating for fulfilling their jobs through the Line application. The majority of the respondents were keen in using computers and accessing the sources through the applications, and could process the sources for presenting both on line and e-mails. The majority of the respondents believed that they would gain more digital literacy benefit, more effective operations, and development of units under the condition provided the digital software and hardware effectively. In term of digital literacy, the organisation did not provide

widespread support to access to digital technology. Therefore, it was still complicated in accessing the Internet resulting in slow development. The knowledge about digital technology arising from age differences among the workers at the operation levels. The digital technology learning of individual was impacted on different levels. In addition, their language skills were at a moderate level. To understand the digital technology, they did not understand the change from traditional to digital systems, because the work performance effectiveness to miss the goals was set by the organization. To use the digital technology, such skills, it was not widely available in the aviation industry. This included problems in organisational internal communications resulting in misunderstandings between individuals in different levels of the management hierarchy, which impacted the use of digital technology to its full potential. The demographic factors that affected media use behaviours were ages, marital status, occupations, job departments, English skills, income and job experiences. The demographic factors that affected the performance and innovation effort expectations were education levels, occupations, job positions, and income. The demographic factors that affected the social influences were ages, education levels and job departments. The demographic factors that affected the facilities condition were ages and education levels. The demographic factors affected the digital literacy were gender, age, education levels, occupations, job positions, job departments, English skills, income, and job experiences. The digital media usage behaviours correlated with the purpose of using digital media in performance and innovation effort expectations, social influences and the facilities condition. The digital media usage behaviours correlated with the purpose of using digital media, the online media activities and the application used during work in the digital literacy. The digital media usage behaviours, performance and innovation effort expectations, social influences, and facilities condition correlated with digital literacy.

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Sariyapa Kantawan

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CHAPTER 1

INTRODUCTION

1.1 Research Background

In the world of globalisation, the progress of science and technology has changed society leaping forward rapidly. All things are connected therefore information is simply at the tip of everyone's fingers. As a result, the Thai government had set a policy, Thailand 4.0, to drive the country (National Strategy 2018-2037) moving forward with science and technology. The vision of the strategy stated that "Thailand is a stable, prosperous, sustainable country. It is a developed country according to the principle of sufficiency economy." Thai people can follow up, examine, and evaluate what the government has done. After the public hearing was conducted from people and concerned units, the policy had implied that all concerned units have to develop the country and be ready to face the new opportunities and threats in the 21th century (Office of the Secretary of the National Strategy Board, 2018).

Thailand has been stuck in an economic trap since the economic crisis of 1997. The trap had a major impact on the middle class population, which was affected having no immunity. The Thai economy has always relied on external trade and capital with a growth of 3-4%. As a result of the competitive hindrance, Thailand could not compete in new science and technology, innovation and creation. At the same time Thailand could no longer compete with the lower capital and labour countries as well (Office of the National Economic and Social Development Council, 2017).

Thailand was not only in the middle income trap, but Thailand was in inequality trap as well. The imbalance trap caused a large gap between the poor and the rich. For centuries, Thai policy was focused on the economic wealth, while environment, happy society and local wisdom faded away.

Media has more influence toward lifestyle of people today. Moreover the access and response to media is very convenient thus, media literacy is a necessary skill for Thai people in the era of Thailand 4.0. Thai people must not only read and write well but they must recognize, analyse, and understand the roles of media. They must be multi-literacy by developing skills and behavior of literacy to be knowledgeable about media (Media Smarts, n.d.).

Digital literacy is the combination of media and technology literacy. The users must create the letters through the multi-media effectively (Smith, 2015). The users must be smart consumers who know how to criticize the media content. Moreover, the users must be eligible to evaluate the media reliability, variety of the media, and idea of the producers, definitions, and effects of the media. Also, they must understand the roles of the media, the targets of the media. They must classify the presentation made by media in the form of data, persuasion, or suggestion (Common Sense Media, n.d.). For the eligibility of technology, Worapoj Wongkitrungrueng (2018) proposed that the users had to understand the idea and basic process of digital devices. They have to learn how to compare the weak and strong points of those devices. Lastly, they had to apply usage of devices for variety daily tasks. They have to use those devices with suitable tasks, technology and eternality. Moreover, they have to understand the laws and ethics of using technology.

Three main reasons for the digital literacy are presented in the following section.

1) Due to the information technology revolution, the Internet was the major driver to change the information technology widely. The Internet decreased the information cost, everyone could access it anytime and anywhere. From the development of web-technology 2.0, the information was borderless and unlimited. Readers could create and distribute their information through the web to their targets easily. They could have communicated anytime and anywhere through their smart phones. (Worapoj Wongkitrungrueng, 2018).

2) The world is changing due to changes from the learning society to industrial society. The factors were: 1) Human resources, working age people had to learn to know more about the media and information because it was the main factor to develop society and economy; 2) Desirable learning society means a society which is

equal, variable. People could share basic education, data, variety of cultures and languages, and free comments, which were for sustainable and better lives; and 3) Decrease the gap of using digital technology of the poor and minor groups (UNESCO, 2005).

3) Choi (2016) suggested the new method of digital learning people into 3 parts. They were: 1) They had to know about media and information, eligible to access, create, evaluate, synthesize and communicate through digital devices and also had to have high skills in selecting, analyze, classifying, interpreting, and understand the data; 2) They had to have ethics and be aware of the economic, social, political and cultural effects through the Internet, including rights, responsibility, and self-defense online; 3) They had to take part in political and social events, such as public hearing through the Internet.

The three parts would have the most impact on the current life style people, especially the working age in Thailand 4.0. They have digital access to transform the data for developing social, self- quality, and benefit the country's economy.

The importance of Eastern Economic Corridor

Eastern Economic Corridor is a project under Thailand 4.0 strategy. It was adapted and developed from Eastern Seaboard strategy which has been in planning for more than 30 years. The purpose of the project was to promote investment for more competition for the long run growth of Thailand economy. The first phase of the project was constructed in Chonburi, Rayong and Chacherngsao to be a pilot project. The laws, regulations, organizations, and missions were set. One main mission was to apply new technology to increase income and facility for all. From the integration and relation of the government, private sectors and people, the mission aimed to hit the target and to upgrade the investment of at least 1.5-million-baht business within 5 years. It was a new pilot and technology base of Thailand. The project was the base of human development, knowledge and technology for future and the national income will be growing not less than 5% annually (Eastern Economic Corridor, 2018).

Aviation and logistics industry is the main industry in EEC. It is a new and is also the heart of EEC, which is located in the advantage zone. The development of aviation and logistics industry is one of the best ways to support other industries in this zone efficiently. U-Tapao Rayong-Pattaya International Airport is a part of

Eastern Airport City so the airport must be developed in tandem. The project is a co-investment of government and private sectors in service, repair, business centers, passenger areas, aviation and logistics centre, aviation repair, aviation training centre, aviation industry for being Thailand the third airport and the aviation hub of Greater Mekong Sub-regional (GMS).

One major point to motivate the project is to power up the labour age which includes man power and labour force. In case of the labour force Ministry of Labour (2017) has divided the labour force into 3 levels. The first is a skilled labour, who is specialised in their respective career both theory and action and can make decision and solve the problem independently. The second one is a semi-skilled labour who is specialized in their respective career but not keen enough to make decision. The last one is the unskilled labour who is not specialized in any career and has to be closely supervised by the foreman.

The aviation and logistics labour forces have to be supported and up graded in the digital literacy for the movement of the new world in the 21th century and to catch up that movement. To learn more, to keen more in the digital, the labour forces, the business has to move forward more efficiently.

1.2 Research Objectives

1) To study the current condition of the aviation industry in Eastern Economic Corridor.

2) To analyse the main factors that affect the digital literacy of the aviation labour forces in the Eastern Economic Corridor.

3) To find the correlation of the main factors that affect the digital literacy of the aviation labour forces in Eastern Economic Corridor.

1.3 Research Hypothesis

1) Different demographics have different media usage behaviours.

2) Different demographics have different performance and innovation effort expectations.

3) Different demographics have different levels social influence.

4) Different demographics have different facilities condition.

5) Different demographics have different levels digital literacy.

6) Digital media usage behaviours are correlated with performance and innovation effort expectations.

7) Digital media usage behaviours are correlated with social influences.

8) Digital media usage behaviours are correlated with the facilities condition.

9) Digital media usage behaviours are correlated with the digital literacy.

10) Digital media usage behaviours, performance and innovation effort expectations, social influences, and facilities condition are correlated with the digital literacy.

1.4 Scope of the Study

The research was focused on the aviation labour forces in Eastern Economic Corridor. In order to decrease capital and increase international competition, the new technology was being implemented in the industry. From those aforementioned reasons, the government has pushed the semi-skilled labour forces to have skills for operating the new technology effectively.

The data had been collected before the COVID 19 spread, which resulted in the issuance of the Emergency Decree on COVID 19 on March 26. 2020 and the Central Bankruptcy Court issuance of the order accepting the request for business rehabilitation of Thai Airways International Co., Ltd. (PLC) on May 27, 2020.

1.5 Definition of Terms

Digital literacy is defined as the skills in using digital technology, communications tools, and communication networks to maximize the benefit in communications, practical work experience, and cooperation among organizations to develop the work process that is modern and effective. It could be classified into four dimensions as explained in the following section.

1) Access is defined as the ability to reach and make use of digital technology. It could be incorporated with information as the basis for self-knowledge such as the ability to discern the positive and negative aspects of various channels or usage of search engine to search for the desired information effectively to adapt for their own use.

2) Knowledge is defined as the accumulation of learning and research from previous experiences with new information learned in order to adapt and solve problems while working.

3) Understand is defined as the understanding of context and evaluate digital media in order to use the information for making decisions about things online. This might result in awareness that digital technology are different. It has different impacts on behavior. For instance, effective use of information technology effective would help in good communications, cooperation, and problem solution.

4) Use is defined as the effectiveness in basic use of computer and Internet and fundamental computer programs such as Microsoft Word, e-mail, and website. This includes using program for information search and using online databases such as cloud computing.

Aviation industry is defined as the aviation logistics that include ground and in flight operations. This encompasses the area surrounding the Utapao Airport within a 30 kilometer radius. Under the airport development plan, this 6,500 rai area is in Tambon Bolpha, Amphor Banchang, Rayong Province. It is within the Eastern seaboard airport promotion.

Labour is defined as those who work in the aviation industry in the EEC in all levels. They work in organizations such as EEC Office, Utapao Airport, Thai Airways Plc., Thai Air Asia Co., Ltd., and Thai Lion Co., Ltd.

Digital media usage behavior is defined as use of social media for conversation, sending messages, online phone calls, watch TV or movies, listening to music, playing online games, read books or articles, learning online, search for information, and buy-sell products and services. This includes financial transactions between work as well as objectives in using digital media along with applications.

Major factors that affect digital literacy is defined as the factors that impact behavioral intentions or use of technology and usage behavior could be classified into three dimensions as follows:

1) Performance and innovation effort expectancy is defined as the belief of individuals regarding the use of systems that result in success in work from beneficial beliefs, motivation benefits, and in accordance with their job or responsibilities. This is in line with the benefits received and can fulfill their needs, which includes expectations regarding the use of digital technology enabling confidence in the effort to use digital technology. It is done in consideration regarding the complexity and complications in using digital technology as well as the simplicity in usage.

2) Social influence is defined as the level of acceptance of the individual's image in the view of society, social components, and social image.

3) Facilitating condition or criteria that are related or including facilities for digital technology. This includes the ability to use digital technology, setting facilitating conditions, and ability to access digital technology.

1.6 Significance of the Study

1.6.1 Academic Contribution

1) To know the digital literacy status of aviation industry labour force in the EEC to use the data to analyze the relevant data.

2) To expand the knowledge and understanding of digital literacy of the aviation industry labour force in the EEC.

3) To develop the guideline to promote and disseminate knowledge and create understanding of digital literacy to every group in society equally.

1.6.2 Policy Contribution

1) To use the factors that impact on digital literacy to enhance the capability of the personnel in the aviation industry. In addition, it would be used develop the organization and authorities to promote digital literacy so that the personnel to be more skillful.

2) When aviation industry personnel have better skills the organization or agency can transfer to digital transformation that is digitally driven. This makes the organization more effective in their work.

3) To develop the guideline for digital literacy policies for the labour 4.0 to develop the capabilities of the personnel to world class standard.

CHAPTER 2

LITERATURE REVIEW

This chapter illustrates the connection between the study and the literature related to the specific area of interest. The chapter introduces theories, concepts, related research and conceptual framework as presented in the following sections.

2.1 Communication Technology Determinism

Communication Technology Determinism, originated from The Toronto School, presumed that communication technology is the most important factor that affects social and cultural changes (Burnett & Marshall, 2003). According to McQuail (2010), this theory examined for the relations between the dominant communication technology of the age and key features of society.

Innis (1950) made various assumptions about the links between the communication media and social structures. He illustrated that the bureaucratic tradition of the Roman Empire, which assisted control of distant shores. Printing technology decreased bureaucratic power and helped the growth of individualism and nationalism (McQuail, 2010). Telephone and telegraph were further used by the elite to obtain more effective control in over large areas. Additionally, Innis believed that

the expansion of communication technologies resulted in greater centralisaition of power (Innis, 1951).

During the 1960s, McLuhan's examination of the impact of the 'electric media' drew attention all over the world. Contrasting the limited effects theorists of the time, he concentrated on the role of electronic media on culture, and gave the microscopic critical theory a macroscopic dimension. He studied the media from a new perspective, accepting the variations that it brought about. He recommended that technology causes changes in social structures and culture, thus reflecting technological determinism (Baran & Davis, 2000).

Technological Determinism could be described as "an approach that identifies technology, or technological advances, as the central causal element in the processes of social changes" (Croteau, Hoynes, & Milan, 2000). Technological Determinism is a theory primary proposed by American sociologist, Thorstein Veblen. The theory demonstrates the interlink between technology and society. It means technology is the basis of change in society influencing cultural, political, and economic aspects as well as grounds for change in the society.

Printing and newspapers brought in new ideologies based on the literature whereas broadcast media declined the ideologies of the new mass culture which was truly mass in nature (Rajasekhar, 2020). Moreover, McQuail (2010) believed that the increasing popularity of the Internet and other computer-based networks provides continuous information thus decline in ideology can be anticipated.

Burnett and Marshall (2003) determined the important elements of theory as explained in the following section.

1) Any dominant technology would unavoidably result in major cultural and social changes, particularly with the main communication technology of time. The influence and effect of the papyrus, the first printing machines, the newspaper, the broadcast media were considered important evidence.

2) With technology being so powerful, it was presumed that this might be for the better or for worse. There were supporters of what it can accomplish. In addition, there were critics of technology, who wanted to examine what it might signify for the future. In communications, the mass media accepted the paradox of being both costs and benefits to society and culture.

3) This made it a reductionist approach to the understanding of the present and future societies due to a kind of brief or narrowing down of all possible influences on society and culture into one generaliable component.

McLuhan (1964) referred to the media extension of our senses and nerves while people extended their frames in space in the mechanical/electrical world to extend their principal nervous structure to embrace the world. The electronic age was inclusive, there was no limited association, and all clutches were involved in the lives of each other, possibility by electronic media. In the electric era, “the globe is no more than a village”. The cracking of the space and time barriers had converted an important aspect of globalisation, shrink the world to a global village (Croteau, Hoynes & Milan, 2000).

Rajasekhar (2020) claimed that in the age of electronics, people totally expected to declare themselves. This made them committed, participative, and irrespective of their opinion and standpoint. Moreover, today’s information age was arguably a perspective with social media being a platform of endless communication of ideas, thoughts, feelings, and happenings. It creates for the users a shared experience in the overwhelming phenomenon of communication production, reception, and broadcasting in the virtual world.

If McLuhan’s electronic media led to the global village, the Internet led to the virtual world, information society, and post-industrial age. It might be perceive as a society with a principal use of computer-mediated communication. Production in an information society was founded on “computers and other electronic devices to create, process, store, and apply information” (Macionis & Plummer, 2005). An information economy requires employees who had symbolic skills, for instance, computing, designing, creating images, also speaking and writing (Rajasekhar, 2020).

Information Society is a society where information is a ‘commodity’ and creating information more worthy and preferred as a vital economic strategy (Chakravartty & Sarikakis, 2006). The information and communication were produced, disseminated, and consumed endlessly. This is done constantly and in huge quantity via social media such as Facebook and Twitter. Facebook was the world’s biggest community in virtual world. The number of mobile phones users rose in thousands each month. The search engine Google enclosed one and all lives; new

media technologies today, were part of our lives as ‘coal, cotton and oil’ that McLuhan stated about the electronic media.

The Information Society had some unique features (Lievrouw & Livingstone, 2006):

1) Technological innovation and diffusion: The Information Society got its name fundamentally from the widespread production, dissemination, and usage of convergent communication technology.

2) Occupational Change: The swift growth of the Information Technology industry has resulted in it being the most current occupation of the day.

3) Economic Value: The products of the Information Society were extraordinary in economic value. For example, the software industry in India significantly contributed to the Indian economy in terms of employment besides brings an amount of foreign exchange.

4) Information flows: Apparently, an Information Society is highly networked in terms of communication and information, characterised by high speed, interactivity, and multi-level communication.

5) The expansion of symbols and signs: Being global in nature in an Information Society is characterised by a complex network of communication flow and a widespread, multilevel dissemination of symbols and signs.

Nowadays communication technologies are generating an information and communication revolution, but are not serving all people equally (Sagan & Leighton, 2010). Internet and new media technologies were criticised for serving, indirectly or openly, the vested interests of those who were promoting the spread of capitalism globally (Comor, 2011). Technologies of the Information Society were only tools that could enhancement other efforts in areas that were vital for development (Chakravartty & Sarikakis, 2006).

Communication is crucial to culture, because communication was central for cultures to develop, grow, exist, thrive and continue (McQuail, 2010). According to Croteau, Hoynes and Milan (2000), media technologies were user friendly and hence had far-reaching significance. Different media offered different experiences. Being human creations, media technologies both inspired and limited social action of people. The social significance of media technologies lay in the fact that they

disturbed human communication. An important effect of communication technologies is that it helps breakdown the barriers of time and space. This had facilitated people to communicate and connect with those who were outside their range of personal communication, by post, telegraph and telephone, email, chat and social media, and mobile phone applications. People with entrance to digital media, for that reason, were in a continuous state of communication - either producing communication, receiving it, or searching for information; through texts, images, sound or videos.

The importance of the communication technology and aviation industry is a major part of presenting the affected factors of the communication towards the labour forces in EEC. This includes the relation of other factors affected, which reflected the real results of understanding skills and digital technology use of the labour forces.

2.2 Diffusion of Innovation

The Diffusion of Innovation is a theory proposed by Rogers (2003) to explain the changes in society and culture that results from the diffusion of innovations from one society to another. Its major components are 1) innovation, which is the concept, practices, or innovations resulting from individuals or the receivers of the innovation that is aligned with the culture would slowly seep into acceptance. If it is easy to understand it would be adopted faster; 2) communication channels are the channels of communications between sender and receivers. It is the mediator for diffusion to be disseminated from the source to the receivers of the innovation; 3) time is the situation that occurs at any given point in time to let people know about the innovation resulting in economic benefits. This process needs time to allow individuals to adapt to the new innovations; and 4) social system, which is the last step of the innovation diffusion. It is the step that finalizes the process. In the digital system, dissemination of innovation happens rapidly as a result of the capability of the technology and development of the Internet. This allows for quick dissemination and can spread to a large number of people. As a result, adoption of innovation becomes faster, this is because society has standards and values that support changes in society and culture more than anytime before.

Rogers (2003) explained that diffusion of innovation is in the form of an S-curve. Figure 2.1 explains how the receivers of innovation, would eventually become senders, who would disseminate the information to members in that society to the point that the innovation would become a norm in that society.

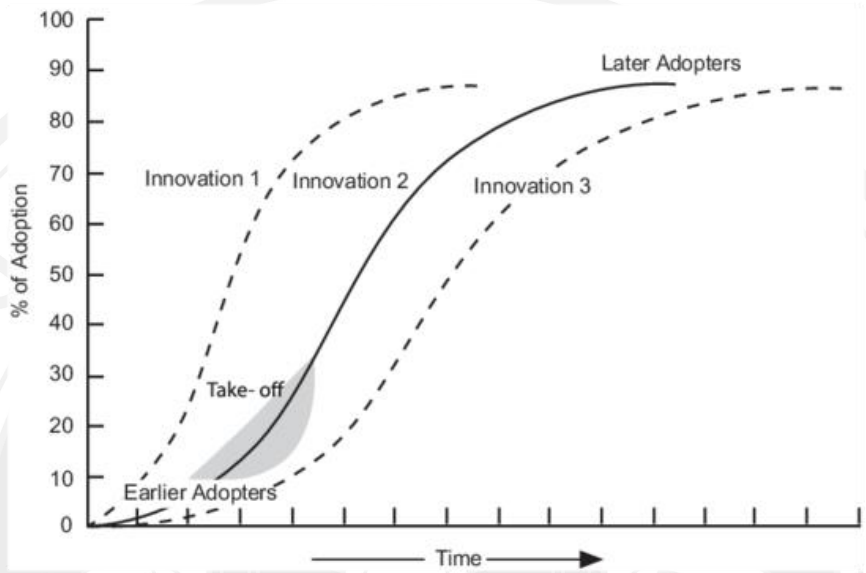

Figure 2.1 The Innovation Diffusion Process
Source: Rogers (2003).

Categorized based on type of individuals who adopt the innovation. There are 5 groups (Figure 2.2) as explained in the following section.

1) Innovators are the first people to accept and use innovation. This group is interested in new concepts and innovations. They have leadership characteristics, dare to risk, like to standout, and want to try new experiences. Price does not concern them.

2) Early Adopters are the first group to use innovation. They are motivated by the newness of the product or service. This group is willing to seek out new experiences so that they would be respected and be of interest to others in society.

3) Early Majority is the group that is open to innovations from interactions in society. They start to use or accept innovations when they feel it is safe

and there those who have tried it. They would see the value and benefit of the new innovation. They are a majority of the people in society.

4) Late Majority is the group that has about the same size as the early majority. They are a big group in society. This group accepts innovation when there are a large number of people using it. The market would have more competitors. The product would be cheaper when compared to the initial effectiveness.

5) Laggards is the last group to accept innovation. This group have many factors that affect their decision to adopt the innovation such as economic, knowledge, and experience with innovation.

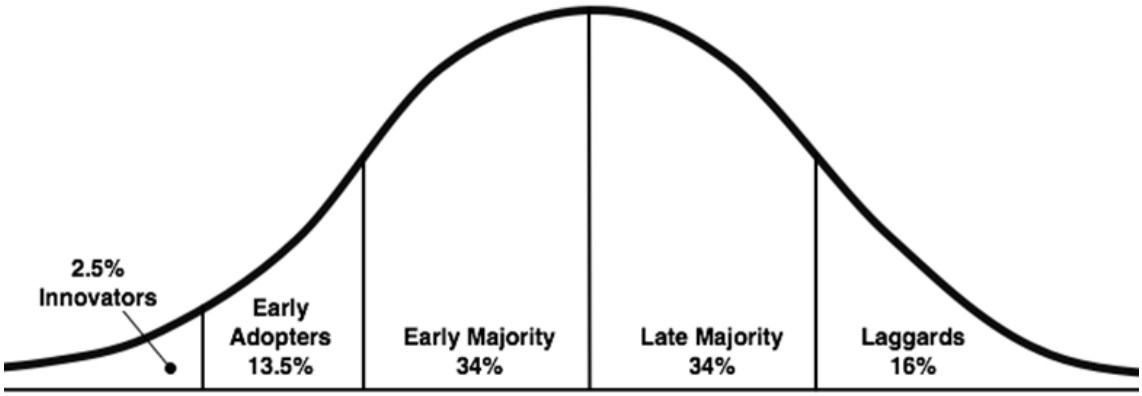

Figure 2.2 Adopter Categorisation on the Basis of Innovativeness
Source: Rogers (2003).

Diffusion of Innovation Process is comprised of 5 stages (Figure 2.3) as presented in the following section.

1) Knowledge is the first step of the diffusion of innovation. The individual has to have three type of knowledge. 1) Awareness-knowledge is the knowledge that innovation has been initiated. This includes the role and importance of the innovation; 2) How-to knowledge is the ability of individuals to explain the mechanisms or steps and what to do with it; 3) Principles-knowledge is the knowledge that enables individuals to explain the principle or theories about the innovation. When individuals have all three types of knowledge, it could be used as the basis for the decision to accept the innovation.

2) Persuasion is the step where individuals who have basic knowledge would start to show interest and search for information. This stage has an impact on the attitude or individuals in both positive and negative ways as a result of being persuaded by other individuals, which would have a direct impact on the next stages.

3) Decision is the stage where individuals determine the value and make the decision to try or not to use the innovation. If individuals have a basic knowledge in using the innovation, they tend to accept the innovation quickly. Individuals who are interested in trying innovation in their own context can understand the situation and make the decision to accept the innovation easily. Individuals who reject innovation have two characteristics which are 1) active rejection, which means consideration of using the innovation in other context when

they realize its importance and 2) passive rejection are not interested and would not even consider innovation.

4) Implementation is the final stage when individuals try the innovation fully within their own context, which might happen in the environment and new work process. This has an impact on uncertainty regarding the effectiveness in innovation. Individuals might need assistance and confirmation from others.

5) Confirmation is the stage where individuals become confident and affirm the decision to continue to accept and use the innovation.

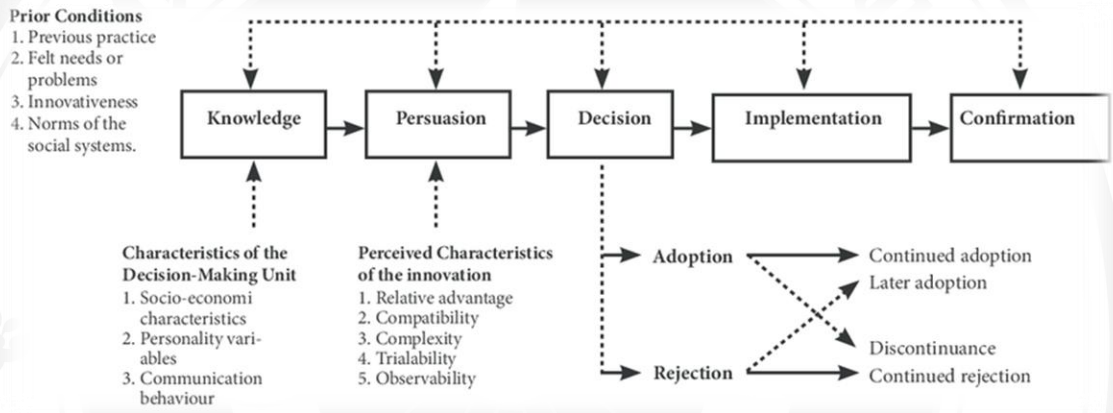

Figure 2.3 A Model of Five Stages in the Innovation-Decision Process
Source: Rogers (2003).

The importance in the using the Diffusion of Innovations theory in this research is to classify the receivers clearly in categories. The adoption of innovation could be connected to the levels of digital literacy in order to explain the results of the findings resulting from the analysis of the factors that impact digital literacy of the aviation industry workers in the EEC.

2.3 Unified Theory of Acceptance and Use of Technology (UTAUT)

Unified Theory of Acceptance and Use of Technology or UTAUT was presented by Venkatesh, Morris, Davis, and Davis (2003), which was based on an examination of a collection of theories regarding technology adoption. The user

measures the use of technology, Technology Acceptance Model (TAM). It is based on the psychology theory, Motivational Model: MM, and other theories related to human behavior (Venkatesh et al, 2003 quoted in Intaratat, 2014). The theories were developed to examine 4 organization regarding their adoption of the technology. These 4 organizations are different and have different contexts in using different types of technology. They have different uses for the technology. There were 654 participants, who joined the study. It is found that there were 4 major factors that directly influenced the behavioral intention and usage behavior. These 4 factors are explained in the following section.

1) Performance expectancy is the level of belief that individuals have that using the system would lead to work success. It is comprised of the following dimensions derived from development and review of various theories as explained in the following section.

(1) Perceived usefulness is the level of belief in the benefit of the user of the system to help improve work performance.

(2) Extrinsic motivation is the ability to use the system to work that would lead to valuable productivity. This is results in getting better things than others such as getting better work performance with better salaries or promotions.

(3) Job or responsibility fit is the ability of the system to help increase the effectiveness of the work and individual's performance.

(4) Relative advantage is the level of benefits that is expected to be received from the use of the innovation. If the target group understands that there is something better than the traditional offer.

(5) Outcome expectations is the expectation regarding the outcome related to the behavior. This could be categorized into the work and individual's expectations.

2) Effort expectancy is the difficulty or ease to use the innovation as explained in the following section.

(1) The confidence or perceived ease of use is the level of belief that the target believes that the use of the innovation does not require much effort or ease of use.

(2) Complexity of the Innovation is the level of complexity is using the innovation. If the innovation is highly complex the target is unlikely to adopt the innovation.

(3) Ease of use is the level of usage of the innovation, which allows the target to easily understand use of the innovation.

3) Social influence is the level of acceptance of society or value of the innovation. It is found that social factors that impact adoption of innovation are explained in the following section.

(1) Subjective norm or attitude of acceptance in society based on the understanding people in society have regarding the innovation.

(2) Social factors or other elements that are related to the relationship between individuals, perspectives, attitudes, culture, acceptance, or agreement within society.

(3) Image or the perspective of society regarding the innovation. This includes people who are expected to use the innovation or those who are already using it further enhancing the image or status of the target or acceptance at a higher level in society.

4) Facilitating condition or the various relevant conditions including facilitating conditions related to the innovation as explained in the following section.

(1) Perceived behavioral control or the facilitation regarding work, operations, control or facilitating the use of innovation such as setting rules, use of various benefits, educating, training of relevant skills, or setting up guidebooks as well as training for those who need to use the innovation.

(2) Facilitating conditions include the factors that are related to requirement or designing of the environment that supports the adoption, trial, or even actual work such as the preparation of the process that provides support. This includes preparing computer equipment or mentors.

(3) Compatibility or the potential or characteristic of the innovation, which supports existing systems or work to be more effective. This includes the ability to fulfill or respond to the needs of the target in a tangible manner.

In addition to the main factors discussed in the previous section, there are other factors that impact innovation. This includes gender, age, experience, and

motivation to use the technology. This is forms the basis for the Unified Theory of Acceptance and Use of Technology: UTAUT) as presented in Figure 2.4.

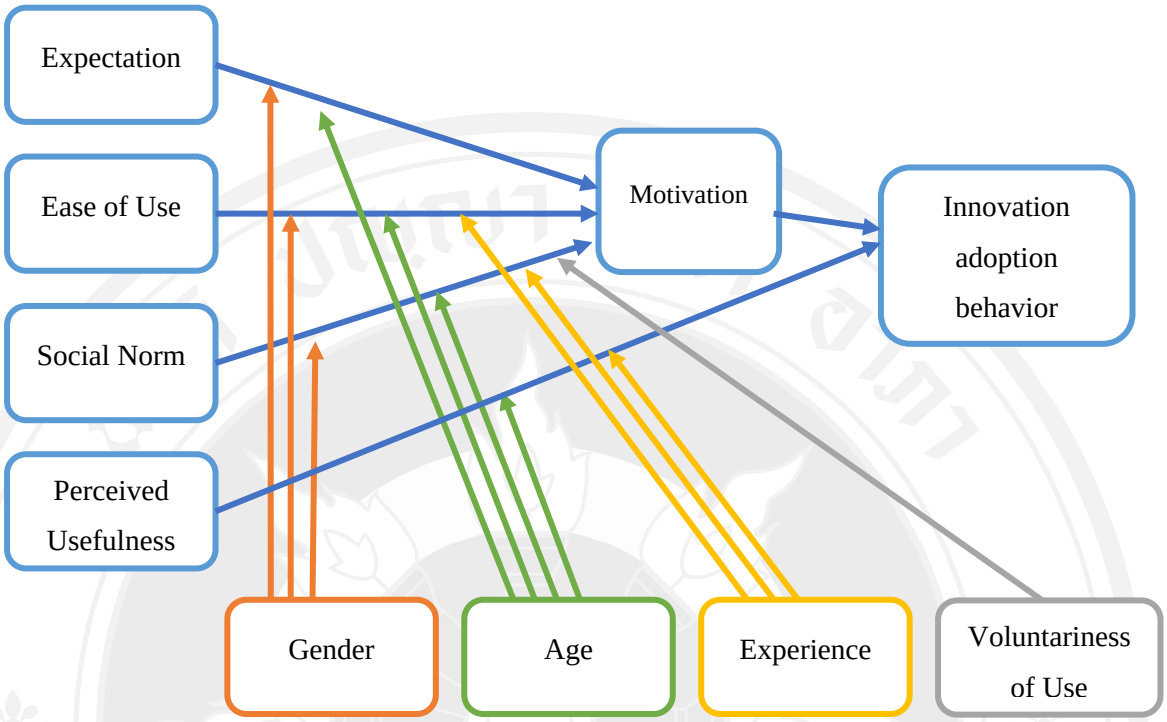

Figure 2.4 Unified Theory of Acceptance and Use of Technology: UTAUT

Despite the fact that UTAUT can be used to clearly predict technology adoption, it is found that there are other factors. There are direct latent and indirect salient factors that have an impact on adoption of innovation, which include hedonic motivation, price value, and habit as explained in the following section.

1) Hedonic motivation factor about the liking, satisfaction, enjoyment, and good feeling related to the use of the innovation. It is a factor that has a direct impact on the adoption of the innovation.

2) Price value is the value from the price in many dimensions because it might mean the price of labor, time, experience, asset, society, as well as attitude, knowledge, and skills that the target uses to compare the cognitive trade off in changing to adopt the innovation. The target needs to make the comparison to evaluate whether the innovation has positive benefits that are worthy in various

dimensions. The most important factor in making the decision whether to choose to adopt or not to adopt the innovation.

3) Habit factors include habit, which is what they do regularly, habit, and the tendency to exhibit such behaviors automatically as a result of what they have learned in the past or experience. This becomes habit. When the innovation is aligned with their actions and processes, it would be adopted. Thus, it can be said that with this alignment the innovation is easier to be adopted.

2.4 Digital Literacy

Digital Literacy is defined as the ability to use digital technology, communication devices, and communications network to solve the current IT problems (Bureau of Consumer Protection in Broadcasting and Television Business, 2005). At the same time Office of the Civil Service Commission (2017) has defined digital literacy as the skill in using tools, equipment, and digital technology that exists today such as computer, telephone, tablet, computer programs, and online media for their maximum benefit. This could be applied in communications, operations, work, cooperation, and development of work processes that enable the organization to have the organization become modern and effective.

This research, thus, concludes the meaning of digital literacy to be the skill in using digital technology, communications tools, and communications network to achieve the maximum benefit in operations and work cooperation in the organization to develop the work process to be more modern and effective.

The skills can be classified into 4 dimensions, which are use, understand, create, and access to digital technology effectively. This could be further categorized into 4 levels of digital literacy (ICDL Thailand, 2018) as explained in the following section.

1) Level of Digital Awareness is the usual characteristic of sending-receiving e-mails, confidence in using the computer, basic knowledge in using the computer, and ability to access the Internet.

2) Level of Digital Literacy is the routine skill such as categorizing e-mail system, know how to maintain Internet security, can create documents, and use spreadsheet to do calculations.

3) Level of Digital Competence is the skill for people working such as cooperating with the team online, manage data security, create presentations, and can create and use digital images.

4) Level of Digital Expertise is the skill for higher positions such as analysis of budgets, creating impressive presentations, doing complex reports, and managing large amounts of data.

The concept of digital literacy is the main concept of this research in order to discuss the research findings on the part of digital literacy of those in the aviation industry in the EEC.

2.5 Digital Labour

Digital labour has various of definitions and areas. This research, will define in the discussions about labour relations and the surface in time and space coordinates of productive interactions.

The changes of paradigm scope where digital workers indicate that in daily experience began in the 20th century initially made by Toffler (1980) to problematize the progressive diffusion. It separates the positions between producer and consumer in the perspective of new economic and political forms. On the other hand, Olivier and O'Neil (2015) illustrated the relationship between digital work and presumption that the extension of the Internet eases the barriers that usually divided production with consumption, proposing the idea of a "prosumer capitalism" (Ritzer & Jurgenson, 2010). Moreover, there are some limitations in the classicial divisions between productive and leisure spaces to define digital labour (Scribano & Lisdero, 2019). Consequently, Arwid (2015) stated that the increases of the concepts of "Playbour/Gamebour" (Play + labour/Game + labour) highlight the diffusion of the times/spaces of "relaxation" and "work" in the actions gradually mediated by the Internet. From the previous work, some studies highlight the definition of Digital Labour as a strong criticism of "free labour" (Terranova, 2013; Kosnik, 2013)

arranged by users of social networks. In addition, this is unpaid labour, which is not strictly regulated in some type of contract-employment, and which is universally agreed. McKenzie (2013) begins a critique of the lengthy logic in the Internet, based on the notion of “Gamification”, from which individuals are able to do things without paying in exchange for symbolic rewards. It is some kind of participation on the beginning of which several companies base their basis of assessment. The cooperative applies an online experience, which have analysed from the concepts of entrepreneurs, or from the suggestions of cooperative work in the framework of cognitive labour, as in the Mechanical Turk (Meil & Kirov, 2017; Michailidou & Kostala, 2016; Aytes, 2013). From a different perspective, the impression of a platform capitalism also situates at the centre of analysis of the cooperative measurement related to the coordination of the action mediated by the Internet.

This concept indicates the following (Armano, Murgia, & Teli, 2017):

1) the powerful extension of a network, ruled by anonymous and inaccessible algorithms, concerned with the mixture of information and people based on market criteria.

2) concentration and industrialisation of the information infrastructure, where cloud computing converts to a platform for the supervision of people and services on a global scale.

3) through the procedures of profiling, Data Mining, and Big Data implementation of the accumulative and systematic collection of data.

4) all of this clues to the composition of an infrastructural environment as a platform that mediates people communication by metabolizing sociability in production processes and the accumulation of digital value.

Though the expansion of the corporate process of outsourcing, whose beginnings can be drawn back to the closing decades of the last century, already understood a transnational connectivity in the transfer of data, the process of digital labour platforms made imaginable by the enlargement of the network is qualitatively changed. Furthermore, based on the aforementioned discussion, this process allows workers or clients to post careers so staffs can propose on them, without the interference of the administrations that officially mediated (Graham, Hjorth, & Lehdonvirta, 2017). Therefore, the emerging of sharing economy contains platforms,

for instance, Upwork, ODesk, Guru, Amazon Mechanical Turk and Uber (Irani, 2015; Cingolani, 2016), also defined work as crowdsourcing (Cherry, 2011; Bergvall-Kåreborn & Howcroft, 2014) underlining the idea of organising work payment through online work exchanges (Huws, 2015).

Besides, the discussion about social class also drives the argument about digital labour. Huws (2013, 2014) states that the existence of a cybertariat, a productive form based on the magnification of the requirement of principal on a globalised and feminised work force, associated with routine work, and on occasions unpaid work, among others. Dyer-Witheford (2015) claims that the framework of cybernetic expansion, a definition of the proletariat that involves certain connections with instability as a characteristic inherent in its condition. In this direction, characteristic of these workers, makes certain shades about the conditions of global capitalism, crossed by primitive forms of accumulation which require to think in the similar range of the coexistence of cyborgs and slaves (Dyer-Witheford, 2015; Huws, 2013; Huws, 2014).

In this direction, Fuchs and Sandoval (2015) supposed that heterogeneity of labour experiences that necessitate varied work organisation, diverse work environments and a wide range of contractual relationships, among others. From this perspective, digital labour includes all those workers involved in the production chains of the digital commodity: both the mineworker who attains lithium in almost slavery conditions, and the programmers who experience flexible working conditions (Scribano & Lisdero, 2019).

Digital labour connecting/disconnecting the seeing, listening, and touching to form perception chains through the senses of a set of actions to create, manage, reproduce, and appropriate the characteristic of digital practice of themselves.

2.6 Related Research

Kanokwan Trakanchan (2017) conducted the study titled, “Study Learning of Digital Technology of PTT Global Plc. Employees” the research findings indicate that in learning of digital technology among the employees it is necessary to develop the Internet connection to be more effective. There has to be sufficient technology

equipment for employees to get their work done. In addition, the technology skills of the employees has to reach expertise level in order to do their work to achieve the maximum effectiveness.

McAdam, Galbraith, Miller, Moffett, and McAdam (2016) conducted the study titled, “The role of Lean at the interface with between operations management and applied services within a large aerospace organisation: a boundary spanning perspective”. Research findings indicate that the aviation industry is highly complex. The design of the organisation management has to rely on the continuous cooperation in order to improve the effectiveness of the organisation. Most of the errors originate from communications and misinterpretation that would lead to changes in the message and delays. The work process needs to be improved to create more effective communications.

Mikhaleva (2016) conducted the study titled, “Media Culture and Digital Generation”. The research findings indicate that individuals who use media often have higher levels of digital literacy. They are able to use digital technology effectively. However, it has quality use of media. They need to manage online data security, use digital technology, and use of digital technology to the achieve the maximum benefit for the individual and society.

Bardai, Er, Johari, and Noor (2017) conducted the study, titled, “A review of Kuala Lumpur International Airport (KLIA) as a competitive South-East Asia hub”. The research findings indicate that evaluation of facilitating factors have been selected in order to create experiences for consumers. This includes managing the international airport in Kuala Lumpur despite massive competition in the Southeast Asian region. However, this is not sufficient to face the challenges in the future particularly in creating experiences for passengers. It necessary to develop better strategies in order to create international level competitiveness.

Setiawan et al. (2018) conducted the study titled, “Business Centre Development Model of Airport Area in Supporting Airport Sustainability in Indonesia”. The research findings indicate that the uplifting of the regional economy particularly in the area around the airport through the concept of Aero City. This includes developing the city around the airport with the goal to develop businesses to attract investors, which would develop the quality of life of those people living around

the airport through the creation of the business center. Consequently, this would increase the gross domestic product and national income.

2.7 Eastern Economic Corridor

The Eastern Economic Corridor Project or EEC is the strategic plan under the Thailand 4.0, which was developed from the Eastern Economic Development Plan or Eastern Seaboard, which has been in operation for more than 30 years. This project has the goal to enhance investment promotion in order to build competitiveness and would result in long-term economic growth for Thailand in the long-term. In the first stage, land in 3 provinces namely Chonburi, Rayong, and Chacheongsao would be developed. This would be done systematically in line with laws, organizations, and clear mission in order to set an example for development in other locations in the future. In addition, it is important to accumulate and use technology in order to benefit to generate income and facilitate people at all levels. The goal is not to leave anyone behind. From the integration of close cooperation among government, private enterprises, and the public. This is done to achieve the goal that has been set, which is to increase investment in every area no less than 1.5 million baht in 5 years. It would serve as an example and serve as the basis for developing new technology for the country. The goal is to develop personnel, knowledge, and technology to keep up with the future advances resulting in higher national income no less than 5% per year.

Today there are 10 target industries that the committee believes have the potential to drive the Thai economy as well as increase the level of competitiveness. This can be categorized into 2 groups as follows:

The group of 5 traditional First S-Curve industries

1) Futuristic Automobile Industry
2) Intelligent Electronics Industry
3) Agriculture and Biotechnology Industry
4) Food Processing Industry
5) High-end and Health Tourism Industry

The group of 5 New S-Curve industries

1) Robotics Industry

2) Aviation and Logistics Industry
3) Integrated Medical Industry
4) Bio-fuel and Bio-chemistry Industry
5) Digital Industry

Progress in the development of the EEC has announced 5 investment support in 5 major areas, which are comprised of the following:

1) Special EEC Zone: Eastern Airport City
2) Eastern Economic Corridor of Innovation: EECi
3) Digital Park Thailand: EECd
4) Smart Park
5) Hemaraj Industrial Park: Eastern Seaboard 4

In addition, the government has approved the development of basic infrastructure in terms of transportation including air, land, rail, and water. This includes the development the management of integrations of systems, which is the EEC project that has to upgrade the country to become the hub of the global economy.

There has also been announcement of the regulations, conditions, and joint investment processes with private enterprises or have private enterprises do the total investment as stipulated in the EEC Track B.E. 2560. This would enable more efficiency in the operations of 6 important projects as follows:

1) Utapao Airport and Aerotropolis
2) High-speed Rail Connection 3 Airports (Suwanabhumi, Don Muang, and Utapao))
3) Maptapud Port Development (Phase 3)
4) Laem Chabang Port Development (Phase 3)
5) Aviation Maintenance Utapao Airport
6) Digital Eastern Economic Corridor (EECd)

EEC has the goal to develop basic transportation infrastructure to increase the competitiveness by reducing the travel time and reducing costs. The objective is to keep travel time between Bangkok to the EEC to no less than 1 hours as the logistics center.

It is an outstanding project for the major industries in the initial stages, which are aviation and logistics. These are new industries that form the basis of key

significance of EEC. This is because Thailand has the advantage in terms of geography, development, and enhancement of the industry would help to support other industries well. It is expected that the aviation and logistics industries would be rapidly becoming high growth among the new industries. The development of the Utapao Airport, which is part of the Eastern Airport City. This project allows private investment in the development of the airport and other continuous supporting activities including the construction as well as providing services and maintenance of the passengers terminal and business center as well as products delivery by air and logistics, airplane maintenance, and aviation business. The objective is to have the country's 3 major airports and aviation business clusters linked in order to become the most important aviation hub in the Greater Mekong subregional-GMS. The business format enabling private company investment is still currently being studied (July, 2018).

The supporting industries in the aviation and logistics industries integrate to encompass 5 types of businesses (Ministry of Labour, 2017) as follows:

1) The public utilities and transportation services such as Inland Container Depot (ICD)

2) Modern logistics center such as Air Cargo, International Distribution Center: IDC, Cold Chain, and Big Data and Analytics in order to be the hub for distribution in the Greater Mekong subregional-GMS.

3) Maintenance, Repair and Overhaul: MRO emphasize the Narrow-body Airframe maintenance, which would grow in number in the Asian region. This includes Component MRO and Engine MRO by pooling together all of the airlines to be the Third Party MRO Provider or OEM. In addition, there is the development of OEM industries by inviting producers in the Tier 1 and 2 levels to invest in Thailand. Support is provided to producers, who have existing production bases in Thailand but have no aviation industry experience to start producing the parts such as Honeywell, Mitsubishi Electrics, and Kawasaki Motors. The Tier 3 producers include support in producing aviation parts in Thailand. This starts with the production of non-safety parts.

4) The development of the area around the airport to become high-value manufacturing such as high-end electronics and medication as well as time-

sensitive products such as agricultural products and fashion together with the development of residences and facilitating industries.

5) Training center for pilot and cabin crew as well as technicians. This includes training for ground staff. The project can be accomplished by cooperating with airlines, producers and distributers of airplanes, training materials producers, or companies established by the government. This would serve the needs of the aviation personnel, which is expected to increase to 460,000 people in 2034 in the Asia-Pacific region.

2.8 Conceptual Framework

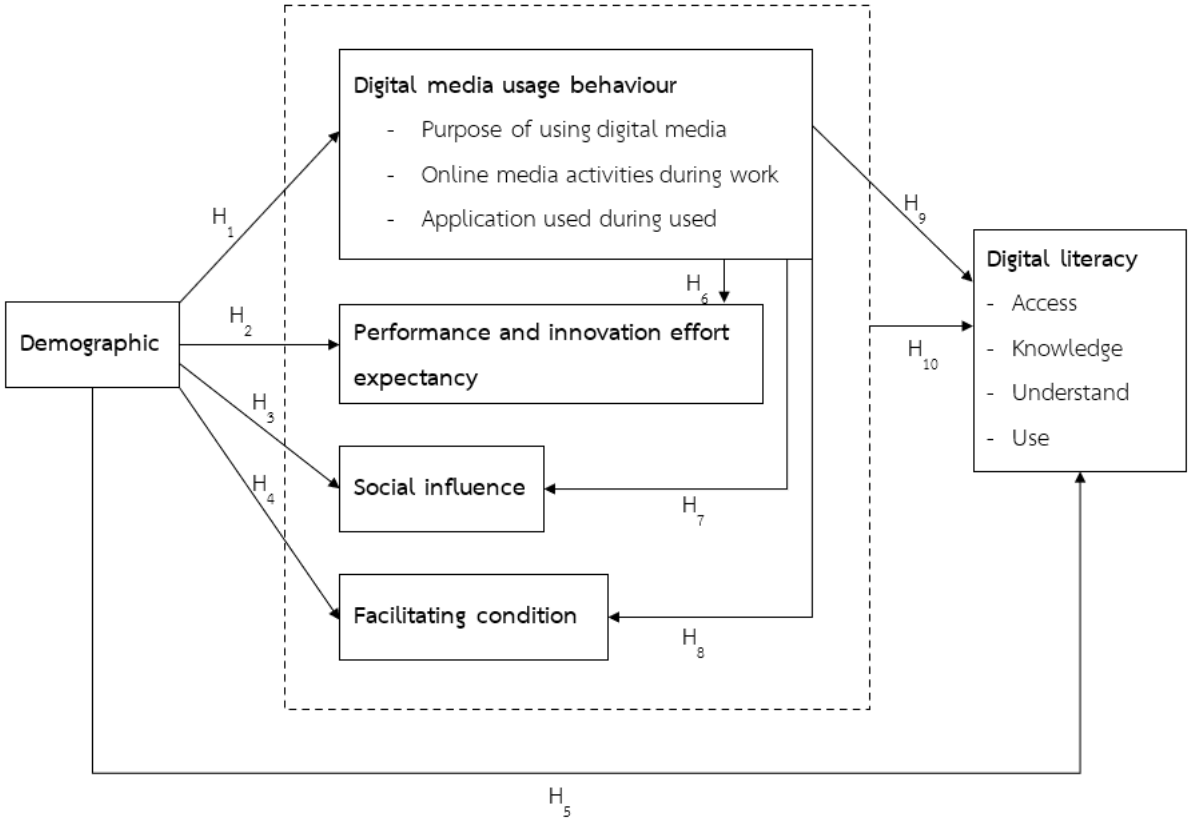

Figure 2.5 Conceptual Framework

CHAPTER 3

RESEARCH METHODOLOGY

The research was conducted by mixed methods. It was divided into two parts. The first part was the qualitative research, aimed to study the current condition of the aviation industry labour forces in EEC. Data was collected through literature review and in-depth interviews. The second one was the quantitative research. It was a one-shot description survey research, aimed to analyse and find the correlation of factors that affect understanding skills and digital technology use of the aviation industry labour forces in EEC. The instrument was a questionnaire.

The research was conducted as explained in the following section.

3.1 Qualitative Research

The mixed method research methodology was conducted using literature reviews and in-depth interview of the aviation industry labour forces in EEC.

3.1.1 Data Sources

1) The secondary data was collected from various places and some documents from the government agents, public organizations, and private organizations. The list includes the EEC Office, Civil Aviation Authority, U-TAPAO Rayong Pattaya International Airport, Office of National Economic and Social Development Board, Department of Economic Development, National Council for Social Development, Ministry of Labour, Navy, Research Administration and Educational Quality Assurance Division, Consumer Protection Office, Office of Broadcasting and Television Affairs, King Mongkut's Research and Innovation Administration Office, Lat Krabang, Office of the Royal Thai Academy, Office of Population and Social Research, National Statistical Office, and Mahidol University.

2) The primary data were collected from in-depth interviews with the aviation industry labour force in the EEC.

3.1.2 Research Instruments

1) The literature review collected data from newsletters, notices, reports, and meeting minutes' summary gathered from the aforementioned sources.

2) The semi-structured interviews and open-end questions were categorized into 2 topics:

(1) General data of the aviation industry labour forces in the EEC.

(2) Understanding skills and digital technology use of informants in the EEC.

3) Multi-media recorders and notebooks.

3.1.3 Instrument Reliability

The instruments were examined by the chief advisor. In addition, a committee was set up to test for the reliability of the contents, language use, and scope of the study. The author then revised and reordered the contents for higher reliability.

3.1.4 Data Collecting

The author had collected data from the secondary sources then analyzed and concluded the contents to develop the question guide for the in-depth interview. The author had interviewed the sample herself, recorded both by tape recorder and written record. Data collection was collected from January - March 2019.

3.1.5 In-depth Interview

Five people involved in the aviation industry in EEC were interviewed by the author during 22 February - 1 March 2019 as follows:

Table 3.1 In-depth Interview

Name-Surname, Position, and Organization	Responsibility	Interview Date
1. Flying Officer Chalermpol Intarawong Director of Infrastructure Management, Eastern Economic Corridor Office of Thailand	He took care of studying, analyzing, following up, commanding and reporting the operation of capitalizing and co-capitalizing for the infrastructure and utilities in EEC zone and co-areas.	1 March 2019
2. Captain Pisit Chaturaskornpat, Director of Communications and Information Technology Division, U-Tapao Rayong-Pattaya International Airport	He took care of commanding, preparing and supplying software and hardware, and developing operators for communication and information technology.	22 February 2019
3. Commamder Pakawat Piriyapol Director of Airport Operations Division, U-Tapao Rayong-Pattaya International Airport	He took care of managing in the airport area, standard checking and preparing for passenger impression.	22 February 2019
4. Mr.Somyos Wittayasakphunt Deputy Director of Aircraft Overhaul Department, Thai Airways International Public Co.ltd	He took care of the major repairs and develop the technicians of the company.	25 February 2019

Name-Surname, Position, and Organization	Responsibility	Interview Date
5. Mr.Sirichai Ketkeaw Staff, U-Tapao Rayong-Pattaya International Airport Fund Operator	He took care of the security of the airport and passengers before they take off, the communication between the pilots and the base.	23 February 2019

3.1.6 Data Analysis and Presentation

The data was collected from documents and in-depth interviews were analyzed and presented in the form of descriptive analysis for the current condition of the aviation industry in EEC.

3.2 Quantitative Research

The quantitative research was used to study the factors affecting understanding skills and digital technology use. This was used to examine the correlation of the factors towards those of the aviation industry labour forces in EEC. It was a one-shot descriptive study. The instrument for data collection was a questionnaire.

3.2.1 Population

The population in this research consisted of 4,618 aviation industry labour forces in EEC (Ministry of Labour, 2017).

3.2.2 Sample Size

The sample group examined in this study consisted of labours in aviation industry. The sampling methodology is described in the following section.

1) The sample size of the research consisted of 354 aviation Industry labour forces. The number of respondents was determined based on the suggestion made by Krejcie and Morgan (1970).

2) They were selected by purposive sampling from U-TAPAO Rayong Pattaya International Airport. It is the major project of the government to develop the

airport to be the heart of the zone, U-TAPAO was invested more than a half of the whole budget for the intelligent airport of the East. After exhausting the sample completely, additional respondents were selected by accident sampling to achieve the required sample size.

3.2.3 Variables

1) Demographics was defined as gender, age, marital status, education, career, job position, job division, English skill, salary, and job experience.

2) Media use behaviour was identified as digital use objectives, digital activity, and application use.

3) Digital literacy was identified as digital use, digital understanding, digital accessing and creating, and filing.

4) Affected factors towards digital literacy were identified as job expecting, innovation use expecting and social power, and facility.

3.2.4 Research Instruments

The questionnaire was designed and developed from data and adapted from the similar field of the research. This includes the current condition of the aviation industry in EEC, which was examined by the author. The questionnaire structure was composed of 4 parts (64 items), presented as follows:

Part 1: General information, 10 items.

Part 2: Digital use behavior, 5 items.

Part 3: Digital literacy, 26 items.

Part 4: Factors affected digital literacy, 23 items.

3.2.5 Variable Measurement

The author set the questions and the rating scales with 5 points of Likert scale, which ranged from the highest to the lowest, defined as follows:

Highest perceived value	=	5 points
High perceived value	=	4 points
Moderate perceived value	=	3 points
Low perceived value	=	2 points

Lowest perceived value = 1 point

The criteria of assigning the mean values for the level of perception were based on the following 5 levels.

Lowest perception = 1.00 – 1.80

Low perception = 1.81 – 2.62

Moderate perception = 2.62 – 3.42

High perception = 3.43 – 4.23

Highest perception = 4.24 – 5.00

3.2.6 Instrument Measurement

The validity and reliability of the questionnaire was tested in order to enhance the clarity and appropriateness of the research instrument.

1) The questionnaire was examined by the experts, the chief adviser, and the dissertation committee for the content validity, wording, relevance and feasibility of the questionnaire. The item objective congruence index (IOC) was more than 0.5. The experts tested in 3 levels: 1 = agree, 0 = not sure and -1 = disagree and found that the index = 0.85.

2) After the author revised the questionnaire according to the experts' examination and suggestion, the questionnaire was pretested with the 50 aviation industry labour forces at Don Mueang International Airport for the reliability, internal consistency, and Cronbach's alpha coefficient (α) was used.

The values of the reliability of the questionnaire are presented in the following section.

Part 2: The reliability of digital use behavior measurement scale as follows:

Item 12: The objectives of the use = 0.798

Item 14: The activity of the use = 0.798

Item 15: The application used = 0.886

Part 3: The reliability of digital literacy measurement scale was 0.949.

Part 4: The reliability of factors affected digital literacy measurement scale was 0.965.

3.2.7 Data Collecting

The questionnaire was collected during January to March 2020 from the aviation industry labour forces in EEC before the COVID 19 spread and the announcement of the Emergency Decree on COVID 19 on March 26, 2020.

3.2.8 Data Analysis

After the data collecting was completed, the author analysed the data by using the statistics as presented in the following section.

1) Descriptive statistics, i.e. frequency (F), percentage (%), mean ($\bar{x}$) and standard deviation (S.D.) were used to describe the independent variables such as population characteristics, digital use behavior, digital literacy, and factors affected digital literacy.

2) Inferential statistics were used for hypothesis test for analyzing the factors affected digital literacy, multiple regression analysis to find the correlation of factors affected digital literacy of the aviation industry labour forces in EEC.

3.2.9 Correlation Rating Criteria

The correlation efficiency (Wichien Ketsingha, 1998) rating to analyse the data was rated at 0.05, as follows:

±0.00 - ±0.20	=	Lowest correlation
±0.21 - ±0.40	=	Low correlation
±0.41 - ±0.60	=	Moderate correlation
±0.61 - ±0.80	=	High correlation
±0.81 - ±1.00	=	Highest correlation

CHAPTER 4

RESEARCH FINDINGS

"Digital Literacy of the Aviation Labour Forces in Eastern Economic Corridor" utilized mixed method research, which could be divided into 2 parts. The first one was a qualitative research conducted based on documents and in-depth interview for the current condition of the aviation industry in Eastern Economic Corridor. The second part was a quantitative research, a one-shot description study. The findings were to examine the correlation of the main factors that affect the understanding skills and digital technology use of the labour forces. The data collection research instrument was a questionnaire.

4.1 Qualitative Research Findings

The current condition of the aviation industry in Eastern Economic Corridor was examined from the documents and in-depth interview of the aviation labour forces in Eastern Economic Corridor. The results were categorized into 3 topics as follows:

1) Aviation industry in Eastern Economic Corridor
2) Digital literacy of the aviation labour force in Eastern Economic Corridor
3) Infrastructure of U-Tapao Rayong-Pattaya International Airport.

4.1.1 Aviation industry in Eastern Economic Corridor.

The aim of the aviation industry in Eastern Economic Corridor was to promote the area of 2,600 acres (6,500 rai) to be the city of the aviation in the East. It was designed to be the centre of the aviation in the region on part with the world standard to support the growth of the aviation industry. This was developed to be the centre of knowledge and technology management in the future. The area was in charge of the two sectors, government, and private sectors.

The area in charge by the government are presented as follows:

1) Runway 2 and Taxiway.
2) Maintenance, Repair and Overhaul Complex (MRO) (Phrase 1 200 acres)
3) Civil Aviation Training Centre
4) Utilities.
5) Flight control tower and air traffic control system.

The area in charge by the private sectors are presented as follows:

1) Terminal 3
2) Ground Transportation Center (GTC)
3) Commercial Gateway
4) Free Trade Zone
5) Cargo Complex
6) Maintenance, Repair and Overhaul Complex

For the roles of U-Tapao Rayong-Pattaya International Airport in the future, it is in the period of change. It is under the responsibility to manage by the Royal Thai Navy to private sectors, Eastern Aviation City Project, and Aeronautical Radio Company of Thailand. The Royal Thai Navy would be in charge of the airport for the security and some of commercialisation.

U-Tapao Rayong-Pattaya International Airport and Royal Thai Navy had set a Memorandum of Understanding (MOU) for operating the area effectively. The MOU stated that:

"U-Tapao Airport" refers to Runway 1, Taxiway, the former buildings and facilities, and U-Tapao Rayong-Pattaya International Airport.

"U-Tapao Rayong-Pattaya International Airport" refers to Runway 2, Taxiway and the expanding buildings and utilities according to U-Tapao Rayong-Pattaya International Airport, and Eastern Aviation City Development Project.

The major functions of Royal Thai Navy are to support security and protect the country as well as nearby countries. The base of the operation is at U-Tapao Rayong-Pattaya International Airport. U-Tapao Rayong-Pattaya International Airport is the base of military operation in both dual use and joint use. The missions of the navy is not limited to military operations but the country development, facilitatation

of public needs, Search and Rescue Center (SAR), and Humanitarian Assistance and Disaster Relief (HA/DR).

U-Tapao Rayong-Pattaya International Airport is the strategic area for variety operations. This includes national security, commercial center, air, water, and land transportation. The basic infrastructure is completely aviable. The area of the airport and the area around the airport is very wide. It is capable of being developed as part of the Eastern Economic Corridor for global economic competition. “The government selected the aviation industry as the first priority because the aviation industry is basis for growth of other industries. It could then enhance the economic growth of the East.” (Flying Officer Chalermpol Intarawong, Director of Infrastructure Management, Eastern Economic Corridor Office of Thailand, in-Depth interview, March 1,2019)

4.1.2 Digital Literacy of the aviation labour Force in Eastern Economic Corridor

Digital literacy of the aviation labour force in Eastern Economic Corridor could be categorized into four dimensions as explained in the following section.

4.1.2.1 Access

Access to digital technology is necessary for the benefit in developing good digital skills. However, if organizations don’t support the development organization wide or there is difficulty in accessing the Internet, development would be slow.

> Another problem is that the company limits the use of Wifi. Employees can only use the Internet through the LAN, which was connected to the PC only. This is because they are afraid that the information would leak so they choose to continue using the Intranet. (Somyos Vitasakphan, personel communication, February 25, 2019)

4.1.2.2 Knowledge

Knowledge about digital technology is very critical to the aviation industry. Duet o the limitation and standards in the industry that is clearly spelled out both locally and at the international level. The organization receives the policy for

operations. The workforce needs to implement those policies. However, the workforce does not have the knowledge as expected by the organization. This is due to the lack of workforce with the expertise, who need to monitor the use of specialized technology. As a result, this has an impact on the development of skills for workforce at the lower levels. This is coupled with the differences between ages of the practitioners, which lead to the learning at the individual level such as Baby Boomers (1946-1964). They make up the majority of workforce in the aviation industry, who do not have the motivation to find additional knowledge and skills. These people do not have the motivation to develop themselves. This is because they don't have much time left to work. In addition, their English skills are at a moderate level. This hinders learning new things. English skills are critical for working in the aviation industry.

> Workforce, which specialized skills are lacking. This is why some are pulled from the government service. On the part of the government, they are concerned that their management would not be flexible. This is because they do not have the expertise in managing airport operations. Opening for applicants to work has not received much interest. As a result, the people who are employed do not fit their job well. (Pisit Chaturaskornpat, personel communication, February 22, 2019)
>
> The supervisor might not have the expertise to fill the job assigned. The only thing they can do is to support their employees as requested. (Pisit Chaturaskornpat, personel communication, February 22, 2019)
>
> Language skills is still an important skill for work. Most of the people can read and write. This is because most of the standard documents are in English. However, they cannot communicate by speaking or listening. Only the supervisors can do that. (Somyos Vitasakphan, personel communication, February 25, 2019)

4.1.2.3 Understanding

The understanding of digital technology has an impact on decisions made in their work in order to ensure maximum effectiveness. The fact that the workforce don't have the understanding to adapt from the traditional to digital systems. As a consequence the effectiveness of the work does not fit the goal that the

organization requires. Moreover, they lack the vision to see how digital technology can improve work operations, which directly has an impact on the firm's operations.

Thai Airways has made a change from SAS, which was used since 1984-2007. After that, SAP was introduced, since it is in line with the global standard. It enables examination of all details in operations. This starts when people clock in to work as well as the time spent working on each piece of work in order to make sure it complies with work standards. In this regard, the company's data in the system is still not sufficiently updated. This is because employees do not accept this function. However, the planning unit is responsible for checking the system. (Somyos Vitasakphan, personel communication, February 25, 2019)

The E-doc system is not trusted 100% by other units. This is because there are no experts in using the system and most still use paper work. (Somyos Vitasakphan, personel communication, February 25, 2019)

4.1.2.4 Usage

The use of digital technology can help benefit operations significantly. This includes use for communications or making work reports. However, such skills are still not yet widespread in the aviation industry. This includes problems in communications within the organization resulting in misunderstanding between people in different management levels resulting in use of digital technology to its fullest potential.

Work problems stem from the fact that most of the workers are familiar with the old system, which requires large amounts of documentation. This makes changing to digital difficult. We don't overlook these problems, however, the change has to be done slowly. (Pakawat Piriyapol, personel communication, February 22, 2019)

Communications in modern ogranizations use Line groups for coordination for speed in operations. There is Internet connection in the passenger terminal and all offices. (Pisit Chaturaskornpat, personel communication, February 22, 2019)

Communications in the organization, which are documents are made in the form of e-mails for coordination or making orders. However, it is not as effective as it should be. However, for less formal communications Line would be used. (Somyos Vitasakphan, personel communication, February 25, 2019)

All of the information about work is announced through Line. As a result, the Line notification has to be turned on throughout the work day. There are many different Line groups categorized based on the level of their position in the organization. One worker has to be in many groups to keep up with the news and perform their duties in a timely manner. (Sirichai Ketkaew, personel communication, February 23, 2019)

Although orders are given through Line, there is still a need to create documentation through the use of e-mail and paperwork. For some part of the work that requires documentation, the information would be sent through e-mail. The staff would need to choose the accuracy of the information and it has to be returned once the verification has been done. (Sirichai Ketkaew, personel communication, February 23, 2019)

On average Thai Airways employees are aged over 50 years. As a result, digital literacy is difficult because they think they would retire soon. They don't see the need to develop themselves by learning something new. These people work the same way they always did. The new generation of workers come in with an understanding of the new way of working. This causes conflict in work including the overlap in work in order to serve the needs of each group. (Somyos Vitasakphan, personel communication, February 25, 2019)

4.1.3 The Infrastructure of U-Tapao Rayong-Pattaya International Airport

U-Tapao Rayong-Pattaya International Airport has been the base of Royal Thai Navy for the national air and marine security. Other missions depend on the government policy, such as supporting military forces and partnership with other countries. It is also developed as the base for relieving national disasters and the

region. This includes being the reserve airport for Suvarnabhumi and Don Mueng International Airports.

The cabinet had approved the commercial airport benefit development policy by Royal Thai Navy on February 21, 1989. At present The Civil Aviation Authority of Thailand (CAAT) had taken charge of the mission. The cabinet had approved U-Tapao Rayong-Pattaya International Airport Division to be a unit to carry on the mission of budget, commercial operation, and the airport management on November 31, 1996.

In 2014 National Council for Peace and Order had set the policy for Ministry of Communication and Ministry of Defence (Royal Thai Navy) to develop U-Tapao Rayong-Pattaya International Airport to be the third national commercial airport. National Council for Peace and Order had a meeting on July 29, 2014 and concluded that the airport would be develop into 3 phases under "One Airport Two Missions" mission. At present it is in the first phase (2015-2017). The target is to support 3 million passengers per year in the both the old and new terminals.

King Mongkut's Institute of Technology Ladkrabang had created the 3 Year Master Plan for Media Technology and Communication (2017-2019). The aims of the plan are to increase the potential of media technology and communication, airline service, entrepreneurs, and customers for the new experiences (KMITL Research and Innovation Services, 2018).

The government has set a project to develop U-Tapao Rayong-Pattaya International Airport to be the third international airport for Bangkok by developing the area of 2,500 acres in the east of the airport to be Eastern Airport City for the aviation and communication hub of the region. This project has been a part of Eastern Economic Corridor. The project includes Airport Link to link Suvarnabhumi International Airport, Don Mueang International Airport and U-Tapao Rayong-Pattaya International Airport for releasing the passenger density of the airlines in Bangkok. The international airport has to be prepared for the air communication increase in the future.

U-Tapao Rayong-Pattaya International Airport Vision

"The Royal Thai Navy Airport has to respond to comprehensive operations of circuitry aspects and role as aviation hub with the international standards in the Eastern part of Thailand."

U-Tapao Rayong-Pattaya International Airport Mission

1) To operate the airport for Royal Thai Navy in national security missions.

2) To operate commercial air transportation in the region with international standard security.

3) To operate the airport and other aviation missions to support both military security and commercial missions sustainably.

U-Tapao Rayong-Pattaya International Airport Roles and Responsibilities

1) To operate the airport for Royal Thai Navy missions in national security and commercial services.

2) To support materials and work forces for emergency or disaster in the region.

3) To provide, combine, fix, maintain, operate, hire equipment, materials and services for facilitation, and security of the airport along with partnership missions.

4) To operate the aviation missions through the airport, properties, services, and facilities.

5) To operate security, facilitation for using and maintaining the airport, properties and facilitators for the aviation along with commercialisation.

6) To comply with the agreement of organisations and air transportation representatives, companies, airlines, aviation entrepreneurs, and others.

7) To protect and control environment as well as to decrease pollution from the airport operation in accordance to the airport environment standard.

Summary: U-Tapao Rayong-Pattaya International Airport has divided the services into 2 parts as explained in the following section.

1) For the security, to be ready in support of the airport infrastructure for the Royal Thai Navy operation both the navy and the air navy for the national

sovereignty along with marine benefits. To serve state aircrafts for Thais and partner countries in training, battle, and maintenance.

2) 2) For the commercialisation, to serve the aviation transportations and other aviation operations such as agri product transportation, industrial products, and MRO. In the future, it can be developed to multi modal to link deep sea ports, roads, and rail roads to support Suvarnabhumi International Airport and Don Mueang International Airport.

> At present U-Tapao Rayong-Pattaya International Airport has been approved to construct the Data Centre for the security of the airport for supporting the international standard which is in line with the Ministry of Information and Communication Technology and International Civil Aviation Organisation – ICAO. (Pisit Chaturaskornpat, personel communication, February 22, 2019)

4.2 Quantitative Research Findings

This part of the study is a quantitative research to analyze the factors that impact digital literacy of the aviation labour force in the Eastern Economic Corridor to find the relationship among the factors that impact digital literacy of the aviation labour force in the Eastern Economic Corridor. The researcher chose to use the survey method to conduct a one-shot study using a questionnaire for the data collection tool. The sample is 400 respondents, which could be categorized into two groups as explained in the following section.

Part 1 This part presents the descriptive statistics analysis of the respondents' profile, digital usage behavior, digital literacy, and factors that impact digital literacy. This includes frequency, percentage, mean, and standard deviation.

Part 2 This part presents the analytic statistics which includes hypotheses testing, analysis of the factors that impact digital literacy of the aviation labour force in the Eastern Economic Corridor, and multiple regression to analyze the relationship among the factors that impact the digital literacy of the aviation labour force in the Eastern Economic Corridor.

4.2.1 Descriptive Statistics Data Analysis

4.2.1.1 Respondents Demographics

Table 4.1 Number and Percentage of Respondents Categorized by Gender

Gender	Number of Respondents	Percentage
Male	252	63.0
Female	148	37.0
Total	400	100.0

Table 4.1 reveals that most of the respondents are male (252 respondents or 63%) and female (148 respondents or 37%).

Table 4.2 Number and Percentage of Respondents Categorized by Age

Age	Number of Respondents	Percentage
15 – 24 years	38	9.5
25 – 34 years	133	33.3
35 – 44 years	90	22.5
45 years and above	139	34.8
Total	400	100.0

Table 4.2 reveals that most of the respondents are aged 45 years and above (139 respondents or 34.8%). This is followed by 25 – 34 years (133 respondents or 33.3%), 35 – 44 years (90 respondents or 22.5%), and 15 – 24 years (38 respondents or 9.5%) respectively.

Table 4.3 Number and Percentage of Respondents Categorized by Marital Status

Marital Status	**Number of Respondents**	**Percentage**
Single	171	42.8
Married	211	52.8
Divorced/Separated	18	4.5
Total	400	100.0

Table 4.3 reveals that most of the respondents are married (211 respondents or 52.8%). This is followed by single (171 respondents or 42.8%) and divorced/separated (18 respondents or 4.5%).

Table 4.4 Number and Percentage of Respondents Categorized by Level of Education

Level of Education	**Number of Respondents**	**Percentage**
Lower than high school	4	1.0
High school or vocational school	66	16.5
Bachelor's Degree	257	64.3
Higher than Bachelor's Degree	73	18.3
Total	400	100.0

Table 4.4 revealed that most of the respondents have a bachelor's degree education (257 respondents or 64.3%). This is followed by those with higher than bachelor's degree (73 respondents or 18.3%), high school education or vocational school (66 respondents or 16.5%), and less than high school has the lowest number (4 respondents or 1.0%).

Table 4.5 Number and Percentage of Respondents Categorized by Occupation

Occupation	Number of Respondents	Percentage
Government official/State enterprise employees	245	61.3
Private sector employees	36	9.0
Investment fund employees	62	15.5
Employees	57	14.2
Total	400	100.0

Table 4.5 revealed that most of the respondents are government officials/employees (245 respondents or 61.3%). This is followed by fund employees (62 respondents or 15.5%), employees (57 respondents or 14.2%), and the lowest number is private company employee (36 respondents or 9.0%).

Table 4.6 Number and Percentage of Respondents Categorized by Work Title

Work Title	Number of Respondents	Percentage
Top level management	13	3.3
Middle management	43	10.8
Lower level management	41	10.3
Operational level	303	75.8
Total	400	100.0

Table 4.6 reveals that most of the respondents are operational level (303 respondents or 75.8%). This is followed by middle management (43 respondents or 10.8%), lower level management (41 respondents or 10.3%), and the lowest number is top level management (13 respondents or 3.3%).

Table 4.7 Number and Percentage of Respondents Categorized by Field of Work/Organization

Field of Work/Organization	Number of Respondents	Percentage
Trade	83	20.8
Finance	52	13
Airport Operations	44	11
Engineering	106	26.5
Aviation	29	7.2
Business development	24	6
Onsite operations	41	10.2
Human resources	7	1.8
Organizational communications	14	3.5
Total	400	100.0

Table 4.7 reveals that most of the respondents work in the engineering unit (106 respondents or 26.5%). This is followed by trade (83 respondents or 20.8%), finance (52 respondents or 13%), airport operations (44 respondents or 11%) respectively. The lowest number is human resources (7 respondents or 1.8%).

Table 4.8 Number and Percentage of Respondents Categorized by English Skills

English Skills	Level of English Usage Level (Percentage)					Mean	Standard Deviation	Meaning
	Very good	Good	Moderate	Fair	Poor			
Listening Skills	11 (2.8)	104 (26.0)	160 (40.0)	119 (29.8)	6 (1.5)	2.99	0.854	Moderate Listening Skills
Speaking Skills	6 (1.5)	95 (23.8)	164 (41.0)	126 (31.5)	9 (2.3)	2.91	0.834	Moderate Speaking

English Skills	Level of English Usage Level (Percentage)					Mean	Standard Deviation	Meaning
	Very good	Good	Moderate	Fair	Poor			
Reading Skills	16 (4.0)	131 (32.8)	160 (40.0)	90 (22.5)	3 (0.8)	3.17	0.846	Skills Moderate Reading Skills
Writing Skills	10 (2.5)	99 (24.8)	174 (43.5)	112 (28.0)	5 (1.3)	2.99	0.824	Moderate Writing Skills

Table 4.8 revealed that most of the respondents' English skills has the highest skill in reading (3.17), followed by listening and writing (2.99), and speaking is the lowest (2.91).

Table 4.9 Number and Percentage of Respondents Categorized by Monthly Income

Monthly Income	Number of Respondents	Percentage
Less than 15,000 Baht	53	13.3
15,000 – 25,000 Baht	117	29.3
25,001 – 35,000 Baht	70	17.5
35,001 – 45,000 Baht	47	11.8
45,001 – 55,000 Baht	51	12.8
More than 55,000 Baht	62	15.5
Total	400	100.0

Table 4.9 reveals that most of the respondents have an average income per month between 15,000 – 25,000 baht (117 respondents or 29.3%). This is followed by 25,001 – 35,000 baht (70 respondents or 17.5%), more than 55,000 baht (62 respondents or 15.5%). The income range that has the least number is 35,001 – 45,000 baht (47 respondents or 11.8%).

Table 4.10 Number and Percentage of Respondents Categorized by Experience in Aviation Industry

Experience in Aviation Industry	Number of Respondents	Percentage
Less than 1 year	39	9.8
More than 1 year up to 2 years	53	13.3
More than 2 years up to 5 years	93	23.3
More than 5 years	215	53.8
Total	400	100.0

Table 4.10 reveals that most of the respondents have worked in the aviation industry for more than 5 years (215 respondents or 53.8%). This is followed by more than 2 years up to 5 years (93 respondents or 23.3%), more than 1 year up to 2 years (53 respondents or 13.3%) respectively. The group that has the lowest number is less than 1 year (39 respondents or 9.8%).

4.2.1.2 Digital Usage Behavior

Table 4.11 Number and Percentage of Respondents Categorized by Time Spent using Digital Media Per Day

Time Spent using Digital Media Per Day	Number of Respondents	Percentage
Less than 1 hour	7	1.8
1 – 3 hours	117	29.3
4 – 6 hours	179	44.8
7 – 8 hours	66	16.5
More than 8 hours	31	7.8
Total	400	100.0

Table 4.11 reveals that most of the respondents spent 4 – 6 hours on digital media (179 respondents or 44.8%). This is followed by 1 – 3 hours (117

respondents or 29.3), 7 – 8 hours (66 respondents or 16.5%), more than 8 hours (31 hours or 7.8%). The group has the lowest number is less than 1 hour (7 respondents or 1.8%).

Table 4.12 Presents Percentage, Mean, and Standard Deviation Categorized by Objective in Using Digital Media

Objective in Using Digital Media	**Level of Digital Media Use (Percentage)**					**Mean**	**Standard Deviation**	**Meaning**
	Use the most	**Use a lot**	**Use moderately**	**Not use much**	**Use the least**			
For Entertainment/ Enjoyment	116 (29.0)	143 (35.5)	104 (26.0)	35 (8.3)	5 (1.3)	3.83	0.982	High use of digital media
To follow daily news	118 (29.5)	180 (45.0)	94 (23.5)	7 (1.8)	1 (0.3)	4.02	0.790	High use of digital media
To find additional knowledge	78 (19.5)	204 (51.0)	105 (26.3)	12 (3.0)	1 (0.3)	3.87	0.764	High use of digital media
Use in work	106 (26.5)	148 (37.0)	119 (29.8)	23 (5.8)	4 (1.0)	3.82	0.924	High use of digital media
To solve various problems	57 (14.2)	116 (41.5)	138 (34.5)	32 (8.0)	7 (1.8)	3.59	0.891	High use of digital media

Table 4.12 reveals that most of the respondents use digital media to follow daily news (mean = 4.02). This is followed by to find additional knowledge (mean = 3.87), for entertainment/ enjoyment (mean = 3.83), use in work (mean = 3.83) respectively. The group that has the lowest number is to use digital media to solve various problems (3.59).

Table 4.13 Number and Percentage of Respondents Categorized by Digital Gadgets used in Work

Digital Gadgets used in Work	Number of Respondents	Percentage
Mobile phone/Smartphone	387	96.8
Tablet	101	25.3
Notebook/Laptop	157	39.3
Computer	276	69.0

Note: *Sample size 400 respondents – multiple response question

Table 4.13 reveals that most of the respondents use mobile phone/smartphone in their work the most (387 units or 96.8%). This is followed by computer (276 units or 69.0%), notebook/ laptop (157 units or 39.3%), and tablet the least (101 units or 25.3%).

Table 4.14 Presents Percentage, Mean, and Standard Deviation Categorized by Digital Media Activities during Work

Digital Media Activities during Work	Level of Digital Media Use (Percentage)					Mean	Standard Deviation	Meaning
	Use the most	Use a lot	Use moderately	Not use much	Not use at all			
Online social media	115 (28.7)	116 (29.0)	115 (28.7)	39 (9.8)	15 (3.8)	3.69	1.100	High use of digital media
Talk, send messages, telephone online	131 (32.8)	148 (37.0)	89 (22.3)	27 (6.8)	5 (1.3)	3.93	0.965	High use of digital media
Watch TV, movie, listening to online music	70 (17.5)	105 (26.3)	118 (29.5)	73 (18.3)	34 (8.5)	3.26	1.192	Moderate use of digital media

Digital Media Activities during Work	Level of Digital Media Use (Percentage)					Mean	Standard Deviation	Meaning
	Use the most	Use a lot	Use moderately	Not use much	Not use at all			
Playing online games	25 (6.3)	36 (9.0)	57 (14.2)	78 (19.5)	204 (51.0)	2.00	1.257	Low use of digital media
Read books, articles, and study online	10 (2.5)	62 (15.5)	139 (34.8)	87 (21.8)	102 (25.5)	2.48	1.106	Low use of digital media
Online information search	137 (34.3)	147 (36.8)	95 (23.8)	17 (4.3)	4 (1.0)	3.99	0.918	High use of digital media
Buy/sell products and services online	42 (10.5)	82 (20.5)	126 (31.5)	80 (20.0)	70 (17.5)	2.87	1.229	High use of digital media
Online financial transactions	81 (20.3)	119 (29.8)	111 (27.8)	46 (11.5)	43 (10.8)	3.37	1.232	Moderate use of digital media

Table 4.14 reveals that most of the respondents use digital media during their work to search information the most with the highest mean (3.99). This is followed by talk, send messages, and make telephone calls online (3.93), online social media (3.69), online financial transactions (3.37) respectively. The lowest use of digital media during work is playing games online (2.00).

Table 4.15 Presents Percentage, Mean, and Standard Deviation Categorized by Application used during Work

Application	Level of Digital Media Use (Percentage)					Mean	Standard Deviation	Meaning
	Use the most	Use a lot	Use moderately	Not use much	Not use at all			
Line	247 (61.8)	99 (24.8)	39 (9.8)	12 (3.0)	3 (0.8)	4.44	0.844	High use of application
FlightAware	18 (4.5)	37 (9.3)	54 (13.5)	66 (16.5)	225 (56.3)	1.89	1.210	Low use of application
Airports	12 (3.0)	25 (6.3)	41 (10.3)	49 (12.3)	273 (68.3)	1.64	1.084	Lowest use of application
NOAA Weather	21 (5.3)	33 (8.3)	31 (7.8)	52 (13.0)	263 (65.8)	1.74	1.214	Lowest use of application
AeroWeather	13 (3.3)	29 (7.2)	48 (12.0)	74 (18.5)	236 (59.0)	1.77	1.115	Lowest use of application
Flightradar24	41 (10.3)	32 (8.0)	62 (15.5)	63 (15.8)	202 (50.5)	2.12	1.376	Low use of application
Google Sites	68 (17.0)	92 (23.0)	58 (14.5)	48 (12.0)	134 (33.5)	2.78	1.526	Moderate use of application
Windy	6 (1.5)	22 (5.5)	44 (11.0)	54 (13.5)	274 (68.5)	1.58	0.988	Lowest use of application

Table 4.15 reveals that most of the respondents use Line application the most (mean = 4.44). This is followed by Google sites (mean = 2.78), Flightradar24 (mean = 2.12), FlightAware (mean = 1.89), and Windy with the lowest mean (1.58).

4.2.1.3 Digital Literacy

Table 4.16 Presents Percentage, Mean, and Standard Deviation Categorized by Access

Topics	Level of Ability (Percentage)					Mean	Standard Deviation	Meaning
	Use the most	Use a lot	Use moderately	Not use much	Not use at all			
Know means and tools to search and access desired information sources	73.0 (18.3)	168 (42.0)	127 (31.8)	25 (6.3)	7 (1.8)	3.69	0.901	High ability
Know the differences and rank of importance of various sources of information based on type, date, topic, writer, sender-receiver, important, and name	38 (9.5)	152 (38.0)	159 (39.8)	38 (9.5)	13 (3.3)	3.41	0.905	Moderate ability
Use media and contact service provider to express personal opinions, thoughts, and have social participation	39 (9.8)	131 (32.8)	163 (40.8)	51 (12.8)	16 (4.0)	3.32	0.953	Moderate ability
Can tell who created the information and content in media	35 (8.8)	130 (32.5)	178 (44.5)	46 (11.5)	11 (2.8)	3.33	0.891	Moderate ability
Can access the work process of the organization online	48 (12.0)	157 (39.3)	141 (35.3)	40 (10.0)	14 (3.5)	3.46	0.949	High ability
Can receive, send information through work systems online	60 (15.0)	147 (36.8)	134 (33.5)	44 (11.0)	15 (3.8)	3.48	0.999	High ability
Can use information received from the online work system of the organization for work	46 (11.5)	165 (41.3)	137 (34.3)	37 (9.3)	15 (3.8)	3.48	0.944	High ability

Table 4.16 reveals that most of the respondents know how to use tools to search and access sources of information the most (mean = 3.69). This is followed by can receive, send information through work systems online and can use information received from the online work system of the organization for work (mean = 3.48) and the lowest is use media and contact service provider to express personal opinions, thoughts, and have social participation (mean = 3.32).

Table 4.17 Presents Percentage, Mean, and Standard Deviation Categorized by Knowledge

Topics	Level of Ability (Percentage)					Mean	Standard Deviation	Meaning
	Use the most	Use a lot	Use moderately	Not use much	Not use at all			
Basic knowledge in using computers	104 (26.0)	153 (38.3)	107 (26.8)	24 (6.0)	12 (3.0)	3.78	0.996	High ability
Know Internet safety measures	65 (16.3)	146 (36.5)	139 (34.8)	41 (10.3)	9 (2.3)	3.54	0.957	High ability
Know how about presentation of information	39 (9.8)	138 (34.5)	154 (38.5)	44 (11.0)	25 (6.3)	3.31	1.002	Moderate ability
Have knowledge about budget analysis	25 (6.3)	90 (22.5)	157 (39.3)	75 (18.8)	53 (13.3)	2.90	1.089	Moderate ability
Have knowledge about big data management	17 (4.3)	83 (20.8)	151 (37.8)	95 (23.8)	54 (13.5)	2.79	1.054	Moderate ability

Table 4.17 reveals that most of the respondents have basic knowledge in using computers (mean = 3.78). This is followed by knowing Internet safety measures (mean = 3.54), know how about presentation of information (mean = 3.31),

have knowledge about budget analysis (2.90) respectively. Have knowledge about big data management is the least at 2.79.

Table 4.18 Presents Percentage, Mean, and Standard Deviation Categorized by Understanding

Topics	Level of Ability (Percentage)					Mean	Standard Deviation	Meaning
	Use the most	Use a lot	Use moderately	Not use much	Not use at all			
Can work as a team online	41 (10.3)	109 (27.3)	162 (40.5)	48 (12.0)	40 (10.0)	3.16	1.087	Moderate ability
Can keep information online secure	46 (11.5)	134 (33.5)	156 (39.0)	41 (10.3)	23 (5.8)	3.35	1.005	Moderate ability
Can perform based on the policy and measures of the organization	44 (11.0)	79 (19.8)	164 (41.0)	72 (18.0)	41 (10.3)	3.03	1.109	Moderate ability
Capture the gist of the information received and can order the events	61 (15.3)	188 (47.0)	123 (30.8)	21 (5.3)	7 (1.8)	3.69	0.855	High ability
Can organize information for presentation	80 (20.0)	171 (42.8)	128 (32.0)	13 (3.3)	8 (2.0)	3.76	0.879	High ability
Can create and use digital images well	40 (10.0)	119 (29.8)	160 (40.0)	50 (12.5)	31 (7.8)	3.22	1.043	Moderate ability
Can do complex reports	24 (6.0)	76 (19.0)	164 (41.0)	93 (23.3)	43 (10.8)	2.86	1.037	Moderate ability
Can manage big data	38 (9.5)	103 (25.8)	143 (35.8)	80 (20.0)	36 (9.0)	3.07	1.094	Moderate ability

Table 4.18 reveals that most of the respondents can present data (mean = 3.76). This is followed by can capture the gist of the information and can order the events (mean = 3.69), can keep online information secure (mean = 3.35), can create and use digital images well (mean = 3.22), and can do complex reports is the lowest at 2.86.

Table 4.19 Presents Percentage, Mean, and Standard Deviation Categorized by Usage

Topics	Level of Ability (Percentage)					Mean	Standard Deviation	Meaning
	Use the most	Use a lot	Use moderately	Not use much	Not use at all			
Can use email	81 (20.3)	141 (35.3)	114 (28.5)	45 (11.3)	19 (4.8)	3.55	1.080	High ability
Can organize email	51 (12.8)	136 (34.0)	138 (34.5)	48 (12.0)	27 (6.8)	3.34	1.062	High ability
Can organize documents	55 (13.8)	148 (37.0)	140 (35.0)	33 (8.3)	24 (6.0)	3.44	1.024	High ability
Can interpret meanings, understand, and can communicate the message to others	27 (6.8)	131 (32.8)	177 (44.3)	38 (9.5)	27 (6.8)	3.23	0.954	Moderate ability
Can use information to create their own pilot work	29 (7.2)	93 (23.3)	175 (43.8)	75 (18.8)	28 (7.0)	3.05	0.995	Moderate ability
Have experience in producing or creating digital information or content	30 (7.5)	87 (21.8)	148 (37.0)	80 (20.0)	55 (13.8)	2.89	1.122	Moderate ability

Table 4.19 reveals that most of the respondents can use email (mean = 3.55). This is followed by can organize documents (mean = 3.44), can organize email (mean = 3.34), can interpret meanings, understand, and can communicate the message to others (mean = 3.23), and have experience in producing or creating digital information or content is the least at 2.89.

4.2.1.4 Factors that Impact Digital Literacy

Table 4.20 Presents Percentage, Mean, and Standard Deviation Categorized by Operations Staff Expectations and Innovation Usage

Topics	Level of Ability (Percentage)					Mean	Standard Deviation	Meaning
	Use the most	Use a lot	Use moderately	Not use much	Not use at all			
Believe in benefit from using digital technologies	101 (25.3)	185 (46.3)	95 (23.8)	15 (3.8)	4 (1.0)	3.91	0.851	High Expectations
Believe that having good digital literacy would help in more effective work performance	96 (24.0)	162 (40.5)	128 (32.0)	10 (2.5)	4 (1.0)	3.84	0.852	High Expectations
Believe in more opportunity in having good digital literacy	75 (18.8)	166 (41.5)	133 (33.3)	19 (4.8)	7 (1.8)	3.71	0.885	High Expectations
Believe would get higher salary with better digital literacy	49 (12.3)	132 (33.0)	158 (39.5)	40 (10.0)	21 (5.3)	3.37	0.998	Moderate Expectations
Believe in promotion with better digital literacy	68 (17.0)	132 (33.3)	134 (33.5)	46 (11.5)	20 (5.0)	3.46	1.059	High Expectations
Believe can do work effectively with better digital literacy	96 (24.0)	159 (39.8)	121 (30.3)	18 (4.5)	6 (1.5)	3.80	0.906	High Expectations
Believe in better quality of life with better digital literacy	68 (17.0)	171 (42.8)	138 (34.5)	18 (4.5)	6 (1.5)	3.70	0.847	High Expectations
Believe that digital literacy	62 (15.5)	157 (39.8)	155 (38.8)	18 (4.5)	6 (1.5)	3.63	0.851	High Expectations

Topics	Level of Ability (Percentage)					Mean	Standard Deviation	Meaning
	Use the most	Use a lot	Use moderately	Not use much	Not use at all			
can fulfill work expectations								
Believe in better relationships with others in the organization would support better skills	73 (13.5)	159 (39.8)	139 (34.8)	22 (5.5)	7 (1.8)	3.67	0.896	High Expectations

Table 4.20 reveals that most of the respondents believe in benefit from using digital technologies (mean = 3.91). This is followed by believe having good digital literacy would help in more effective work performance (mean = 3.84), believe can do work effectively with better digital literacy (mean = 3.80), believe in more opportunity in having good digital literacy (mean = 3.71) respectively and believe would get higher salary with better digital literacy is the least at 3.37.

Table 4.21 Presents Percentage, Mean, and Standard Deviation Categorized by Social Impact

Topics	Level of Ability (Percentage)					Mean	Standard Deviation	Meaning
	Use the most	Use a lot	Use moderately	Not use much	Not use at all			
Believe that the organization policy would help to support good skills development	54 (13.5)	144 (36.0)	174 (43.5)	19 (4.8)	9 (2.3)	3.54	0.866	High Expectations
Believe that digital technology can help the organization develop	90 (22.5)	192 (48.0)	108 (27.0)	7 (1.8)	3 (0.8)	3.90	0.790	High Expectations
Believe that good organization	64 (16.0)	191 (47.8)	132 (33.0)	10 (2.5)	3 (0.8)	3.76	0.775	High Expectations

Topics	Level of Ability (Percentage)					Mean	Standard Deviation	Meaning
	Use the most	Use a lot	Use moderately	Not use much	Not use at all			
culture would help support better skills								
Believe that digital technology plays a role in social development	83 (21.3)	185 (46.3)	121 (30.3)	7 (1.8)	2 (0.5)	3.86	0.782	High Expectations
Believe that digital literacy can meet work expectations	62 (15.5)	176 (44.0)	143 (35.8)	15 (3.8)	4 (1.0)	3.69	0.812	High Expectations
Believe that digital technology helps improve social standards	56 (14.0)	162 (40.5)	153 (38.3)	25 (6.3)	4 (1.0)	3.60	0.840	High Expectations
Believe that using digital technology supports better social image	55 (13.8)	152 (38.0)	167 (41.8)	22 (5.5)	4 (1.0)	3.58	0.831	High Expectations
Believe that using digital technology supports better social status	51 (12.8)	161 (40.3)	156 (39.0)	28 (7.0)	4 (1.0)	3.57	0.838	High Expectations

Table 4.21 reveals that most of the respondents believe that digital technology can help the organization develop (mean = 3.90). This is followed by believe that digital technology plays a role in social development (3.86), believe that good organization culture would help support better skills (mean = 3.76), believe that good organization culture would help support better skills (mean = 3.69) respectively. The lowest is believe that the organization policy would help to support good skills development (mean = 3.54).

Table 4.22 Presents Percentage, Mean, and Standard Deviation Categorized by Facilitating Factors

Topics	Level of Ability (Percentage)					Mean	Standard Deviation	Meaning
	Use the most	Use a lot	Use moderately	Not use much	Not use at all			
Believe that if the organization has regular digital technology training skills would be better	86 (21.5)	174 (43.5)	122 (30.5)	14 (3.5)	4 (1.0)	3.81	0.846	High Expectations
Believe that organizations with operations manual in using digital technology would have better skills	72 (18.0)	176 (44.0)	136 (34.0)	10 (2.5)	4 (1.0)	3.76	0.811	High Expectations
Believe that organizations have digital technology rights and benefits have better skills	64 (16.0)	184 (46.0)	136 (34.0)	13 (3.3)	3 (0.8)	3.73	0.792	High Expectations
Believe that organizations that have clear rules in using digital technology have better skills	63 (15.8)	163 (40.8)	158 (39.5)	13 (3.3)	3 (0.8)	3.68	0.804	High Expectations
Believe that organizations that prepare the materials and equipment for using digital technology have better skills	91 (22.8)	171 (42.8)	116 (29.0)	19 (4.8)	3 (0.8)	3.82	0.863	High Expectations

Topics	Level of Ability (Percentage)					Mean	Standard Deviation	Meaning
	Use the most	Use a lot	Use moderately	Not use much	Not use at all			
Believe that organizations that have mentor system in using digital technology have better skills	78 (19.5)	178 (44.5)	119 (29.8)	20 (0.5)	5 (1.3)	3.76	0.866	High Expectations

Table 4.22 reveals that most of the respondents believe that organizations that prepare the materials and equipment for using digital technology have better skills (mean = 3.82). This is followed by believe that if the organization has regular digital technology training skills would be better (mean = 3.81), believe that organizations with operations manual in using digital technology would have better skills and that organizations that have mentor system in using digital technology have better skills (mean = 3.76) respectively. The lowest is believe that organizations that have clear rules in using digital technology have better skills (mean = 3.68).

4.2.2 Results of Inferential Statistics Analysis

4.2.2.1 Hypotheses Testing

Hypothesis 1 Different demographics have different media usage behavior.

Sub Hypothesis 1.1 Different gender have different media usage behavior.

H_0: Different gender have no difference in media usage behavior.

H_1: Different gender have different media usage behavior.

Table 4.23 Comparison of Media Usage Behavior Categorized by Gender

Gender	Number of Respondents	Mean	Standard Deviation	t	Sig.
Male	252	3.07	.537	-1.101	.272
Female	148	3.13	.497		

Table 4.23 reveal that the H_0 is supported, which states that different gender have no difference in media usage behavior.

Sub Hypothesis 1.2 Different age have different media usage behavior.

H_0: Different age have no difference in media usage behavior.

H_1: Different age have different media usage behavior.

Table 4.24 Comparison of Media Usage Behavior Categorized by Age

Age	Number of Respondents	Mean	Standard Deviation	F	Sig.
15 - 24 years	38	3.08	.356	40.294*	.000
25 - 34 years	133	3.39	.473		
35 - 44 years	90	3.13	.468		
45 years above	139	2.78	.465		

Note: * Sig. < .05

Table 4.24 reveal that the H_0 is not supported, which states that different age have different media usage behavior at the significance level of 0.05.

Sub Hypothesis 1.3 Different marital status have different media usage behavior.

H_0: Different marital status have no difference in media usage behavior.

H_1: Different marital status have different media usage behavior.

Table 4.25 Comparison of Media Usage Behavior Categorized by Marital Status

Marital Status	Number of Respondents	Mean	Standard Deviation	F	Sig.
Single	171	3.21	.454	10.823*	.000
Married	211	3.02	.557		
Divorced/Separated	18	2.73	.428		

Note: * Sig. < .05

Table 4.25 reveal that the H_0 was not supported, which states that different marital status have different media usage behavior at the significance level of 0.05.

Sub Hypothesis 1.4 Different level of education have different media usage behavior.

H_0: Different level of education have no difference in media usage behavior.

H_1: Different level of education have different media usage behavior.

Table 4.26 Comparison of Media Usage Behavior Categorized by Level of Education

Level of Education	Number of Respondents	Mean	Standard Deviation	F	Sig.
Lower than High School	4	3.00	.062	.090	.965
High School or Vocational School	66	3.10	.562		
Bachelor's Degree or equivalent	257	3.09	.550		
Higher than Bachelor's Degree	73	3.07	.391		

Table 4.26 reveal that the H_0 was supported, which states that different level of education have no difference in media usage behavior.

Sub Hypothesis 1.5 Different occupation have different media usage behavior.

H_0: Different occupation have no difference in media usage behavior.

H_1: Different occupation have different media usage behavior.

Table 4.27 Comparison of Media Usage Behavior Categorized by Occupation

Occupation	Number of Respondents	Mean	Standard Deviation	F	Sig.
Government official/employee	245	2.97	.524	12.267 *	.000
Private company employee	36	3.34	.486		
Investment fund officer	62	3.27	.458		
Employee	57	3.25	.458		

Note: * Sig. < .05

Table 4.27 reveal that the H_0 was not supported which states that different occupation have different media usage behavior at the significance level of 0.05.

Sub Hypothesis 1.6 Different work position have different media usage behavior.

H_0: Different work position have no difference in media usage behavior.

H_1: Different work position have different media usage behavior.

Table 4.28 Comparison of Media Usage Behavior Categorized by Position

Position	Number of Respondents	Mean	Standard Deviation	F	Sig.
Executive Level	13	2.72	.550	2.604	.052
Middle Management Level	43	3.05	.452		
Lower Management Level	41	3.05	.424		
Operations Officer	303	3.11	.538		

Table 4.28 reveal that the H_0 was supported which states that different work position have no difference in media usage behavior.

Sub Hypothesis 1.7 Different work group/department have different media usage behavior.

H_0: Different work group/department have no difference in media usage behavior.

H_1: Different work group/department have different media usage behavior.

Table 4.29 Comparison of Media Usage Behavior Categorized by Work Group/Department

Work Group/Department	Number of Respondents	Mean	Standard Deviation	F	Sig.
Policy and Strategy	10	2.69	.271	3.028*	.000
Business Development and Resources	14	3.12	.708		
Airport and Aviation Standard	19	3.05	.805		
Troops	11	3.07	.358		
Communications and	10	3.00	.397		

Work Group/Department	Number of Respondents	Mean	Standard Deviation	F	Sig.
Information Technology					
Parcel and Service	35	2.89	.403		
Legal	5	2.97	.733		
Finance	23	3.18	.485		
Administrative Affairs	29	3.06	.410		
Airport Operations	44	3.35	.452		
Engineering	106	3.06	.539		
Aviation	29	3.38	.552		
Business Development	7	3.34	.492		
Ground Staff	23	2.99	.411		
Security	7	3.15	.353		
Human Resources	7	2.84	.404		
Organization Communications	4	2.23	.556		
Products and Services	17	3.11	.292		

Note:* Sig. < .05

Table 4.29 reveal that the H_0 was not supported which states that different work group/department have different media usage behavior at the significance level of 0.05.

Sub Hypothesis 1.8 English skills have a relationship with media usage behavior.

H_0: English skills have no relationship with media usage behavior.

H_1: English skills have a relationship with media usage behavior.

Table 4.30 Analysis of the Relationship between English Skills and Media Usage Behavior

Variable	Media Usage Behavior	
	r	Sig.
English Skills	.248*	.000

Note: * Sig. < .05

Table 4.30 reveal that the H_0 was not supported which states that English skills have the relationship with media usage behavior at the significance level of 0.05. It is a positive relationship and the relationship is at a low level.

Sub Hypothesis 1.9 Different average income per month have different media usage behavior.

H_0: Different average income per month have no difference in media usage behavior.

H_1: Different average income per month have different media usage behavior.

Table 4.31 Comparison of Media Usage Behavior Categorized by Income per Month

Income per Month	Number of Respondents	Mean	Standard Deviation	F	Sig.
Less than 15,000 Baht	53	3.22	.410	12.628*	.000
15,000 - 25,000 Baht	117	3.31	.499		
25,001 - 35,000 Baht	70	3.10	.487		
35,001 - 45,000 Baht	47	2.77	.446		
45,001 - 55,000 Baht	51	2.83	.572		
More than 55,000 Baht	62	3.02	.487		

Note: * Sig. < .05

Table 4.31 reveal that the H_0 was not supported which states that different income per month have different media usage behavior at the significance level of 0.05.

Sub Hypothesis 1.10 Different Experience Working in Aviation Industry have different media usage behavior.

H_0: Different Experience Working in Aviation Industry have no difference in media usage behavior.

H_1: Different Experience Working in Aviation Industry have different media usage behavior.

Table 4.32 Comparison of Media Usage Behavior Categorized by Experience Working in Aviation Industry

Experience Working in Aviation Industry	Number of Respondents	Mean	Standard Deviation	F	Sig.
Less than 1 year	39	3.10	.388	11.890*	.000
More than 1 - 2 years	53	3.31	.558		
More than 2 - 5 years	93	3.26	.525		
More than 5 years	215	2.96	.497		

Note: * Sig. < .05

Table 4.32 reveal that the H_0 was not supported which states that different Experience Working in Aviation Industry have different media usage behavior at the significance level of 0.05.

Hypothesis 2 Different demographics have different expectations to work performance and the use innovation.

Sub Hypothesis 2.1 Different gender have different expectations to work performance and the use innovation.

H_0: Different gender have no difference in expectations to work performance and the use innovation.

H_1: Different gender have different expectations to work performance and the use innovation.

Table 4.33 Comparison of Operations Staff Expectations and Innovation Usage Categorized by Gender

Gender	Number of Respondents	Mean	Standard Deviation	t	Sig.
Male	252	3.68	.729	-.139	.889
Female	148	3.69	.670		

Table 4.33 reveal that the H_0 was supported which states that different gender have no difference in expectations to work performance and the use innovation.

Sub Hypothesis 2.2

Different age groups have different expectations to work performance and the use innovation.

H_0: Different age groups have no difference in expectations to work performance and the use innovation.

H_1: Different age groups have different expectations to work performance and the use innovation.

Table 4.34 Comparison of Operations Staff Expectations and Innovation Usage Categorized by Age

Age	Number of Respondents	Mean	Standard Deviation	F	Sig.
15 - 24 years	38	3.63	.710	1.445	.229
25 - 34 years	133	3.68	.718		
35 - 44 years	90	3.80	.692		
45 years and over	139	3.61	.702		

Table 4.34 reveal that the H_0 was supported which states that different age groups have no difference in expectations to work performance and the use innovation.

Sub Hypothesis 2.3 Different marital status have different expectations to work performance and the use innovation.

H_0: Different marital status have no difference in expectations to work performance and the use innovation.

H_1: Different marital status have different expectations to work performance and the use innovation.

Table 4.35 Comparison of Operations Staff Expectations and Innovation Usage Categorized by Marital Status

Marital Status	Number of Respondents	Mean	Standard Deviation	F	Sig.
Single	171	3.69	.650	.091	.913
Married	211	3.67	.747		
Divorced/Separated	18	3.71	.771		

Table 4.35 reveal that the H_0 was supported which states that different marital status have no difference in expectations to work performance and the use innovation.

Sub Hypothesis 2.4

Different level of education have different expectations to work performance and the use innovation.

H_0: Different level of education have no difference in expectations to work performance and the use innovation.

H_1: Different level of education have different expectations to work performance and the use innovation.

Table 4.36 Comparison of Operations Staff Expectations and Innovation Usage Categorized by Level of Education

Level of Education	Number of Respondents	Mean	Standard Deviation	F	Sig.
Lower than High School	4	4.03	.787	3.268*	.021
High School or Vocational School	66	3.50	.684		
Bachelor's Degree or equivalent	257	3.67	.772		
Higher than Bachelor's Degree	73	3.85	.633		

Note: * Sig. < .05

Table 4.36 reveal that the H_0 was not supported which states that different level of education have no difference in expectations to work performance and the use innovation at the significance level of 0.05.

Sub Hypothesis 2.5 Different occupation have different expectations to work performance and the use innovation.

H_0: Different occupation have no difference in expectations to work performance and the use innovation.

H_1: Different occupation have different expectations to work performance and the use innovation.

Table 4.37 Comparison of Operations Staff Expectations and Innovation Usage Categorized by Occupation

Occupation	Number of Respondents	Mean	Standard Deviation	F	Sig.
Government official/employee	245	3.61	.681	5.507*	.001
Private company employee	36	4.11	.551		
Investment fund officer	62	3.63	.828		
Employee	57	3.68	.677		

Note: * Sig. < .05

Table 4.37 reveal that the H_0 was not supported which states that different occupation have different expectations to work performance and the use innovation at the significance level of 0.05.

Sub Hypothesis 2.6 Different work position have different expectations to work performance and the use innovation.

H_0: Different work position have no difference in expectations to work performance and the use innovation.

H_1: Different work position have different expectations to work performance and the use innovation.

Table 4.38 Comparison of Operations Staff Expectations and Innovation Usage Categorized by Position

Position	Number of Respondents	Mean	Standard Deviation	F	Sig.
Executive Level	13	3.56	.533	4.199*	.006
Middle Management Level	43	3.97	.440		

Position	Number of Respondents	Mean	Standard Deviation	F	Sig.
Lower Management Level	41	3.85	.688		
Operations Officer	303	3.62	.734		

Note: * Sig. < .05

Table 4.38 reveal that the H_0 was supported which states that different work position have no difference in expectations to work performance and the use innovation at the significance level of 0.05.

Sub Hypothesis 2.7 Different work group/department have different expectations to work performance and the use innovation.

H_0: Different work group/department have no difference in expectations to work performance and the use innovation.

H_1: Different work group/department have different expectations to work performance and the use innovation.

Table 4.39 Comparison of Operations Staff Expectations and Innovation Usage Categorized by Work Group/Department

Work Group/Department	Number of Respondents	Mean	Standard Deviation	F	Sig.
Policy and Strategy	10	3.57	.616	1.795*	.027
Business Development and Resources	14	3.24	.413		
Airport and Aviation Standard	19	3.57	.417		
Troops	11	3.81	.647		
Communications and Information Technology	10	4.31	.686		
Parcel and Service	35	3.56	.746		

Work Group/Department	Number of Respondents	Mean	Standard Deviation	F	Sig.
Legal	5	3.55	.228		
Finance	23	3.69	.553		
Administrative Affairs	29	3.88	.623		
Airport Operations	44	3.50	.910		
Engineering	106	3.62	.799		
Aviation	29	3.77	.587		
Business Development	7	4.21	.710		
Ground Staff	23	3.74	.715		
Security	7	3.92	.204		
Human Resources	7	3.73	.479		
Organization Communications	4	3.64	.600		
Products and Services	17	3.95	.299		

Note: * Sig. < .05

Table 4.39 reveal that the H_0 was not supported which states that different work group/department have different expectations to work performance and the use innovation at the significance level of 0.05.

Sub Hypothesis 2.8 English skills have a relationship with expectations of work performance and the use innovation.

H_0: English skills have no relationship with expectations of work performance and the use innovation.

H_1: English skills have a relationship with expectations of work performance and the use innovation.

Table 4.40 Analysis of the Relationship between English Skills with Operations Staff Expectations and Innovation Usage

Variables	Expectations of Operations and Innovation Users	
	r	Sig.
English Skills	.078	.122

Table 4.40 reveal that the H_0 was supported which states that English skills have no relationship with expectations of work performance and the use innovation.

Sub Hypothesis 2.9 Different income per month have different expectations to work performance and the use innovation.

H_0: Different income per month have no difference in expectations to work performance and the use innovation.

H_1: Different income per month have different expectations to work performance and the use innovation.

Table 4.41 Comparison of Operations Staff Expectations and Innovation Usage Categorized by Income per Month

Income per Month	Number of Respondents	Mean	Standard Deviation	F	Sig.
Less than 15,000 Baht	53	3.68	.674	2.828*	.016
15,000 - 25,000 Baht	117	3.69	.726		
25,001 - 35,000 Baht	70	3.44	.737		
35,001 - 45,000 Baht	47	3.74	.823		
45,001 - 55,000 Baht	51	3.69	.610		
More than 55,000 Baht	62	3.88	.579		

Note: * Sig. < .05

Table 4.41 reveal that the H_0 was not supported which states that different income per month have different expectations to work performance and the use innovation at the significance level of 0.05.

Sub Hypothesis 2.10 Different experience working in aviation industry have different expectations to work performance and the use innovation.

H_0: Different experience working in aviation industry have no difference in expectations to work performance and the use innovation.

H_1: Different experience working in aviation industry have different expectations to work performance and the use innovation.

Table 4.42 Comparison of Operations Staff Expectations and Innovation Usage Categorized by Experience Working in Aviation Industry

Experience Working in Aviation Industry	**Number of Respondents**	**Mean**	**Standard Deviation**	**F**	**Sig.**
Less than 1 year	39	3.69	.787	0.198	.897
More than 1 – 2 years	53	3.63	.809		
More than 2 - 5 years	93	3.66	.537		
More than 5 years	215	3.70	.733		

Table 4.42 reveal that the H_0 was supported which states that different experience working in aviation industry have no difference in expectations to work performance and the use innovation.

Hypothesis 3 Different demographics have different levels of social influence.

Sub Hypothesis 3.1 Different gender have different levels of social influence.

H_0: Different gender have no difference in levels of social influence.

H_1: Different gender have different levels of social influence.

Table 4.43 Comparison of Social Influence Categorized by Gender

Gender	Number of Respondents	Mean	Standard Deviation	t	Sig.
Male	252	3.71	.693	.741	.459
Female	148	3.66	.572		

Table 4.43 reveal that the H_0 was supported which states that different gender have no difference in levels of social influence.

Sub Hypothesis 3.2 Different age groups have different levels of social influence.

H_0: Different age groups have no difference in levels of social influence.

H_1: Different age groups have different levels of social influence.

Table 4.44 Comparison of Operations Staff Expectations and Innovation Usage Categorized by Age

Age	Number of Respondents	Mean	Standard Deviation	F	Sig.
15 - 24 years	38	3.67	.559	3.639*	.013
25 - 34 years	133	3.60	.685		
35 - 44 years	90	3.88	.601		
45 years and over	139	3.65	.653		

Note: * Sig. < .05

Table 4.44 reveal that the H_0 was not supported which states that different age groups have different levels of social influence at the significance level of 0.05.

Sub Hypothesis 3.3 Different marital status have different levels of social influence.

H_0: Different marital status have no difference in levels of social influence.

H_1: Different marital status have different levels of social influence.

Table 4.45 Comparison of Social Influence Categorized by Marital Status

Marital Status	Number of Respondents	Mean	Standard Deviation	F	Sig.
Single	171	3.67	.650	.163	.850
Married	211	3.70	.638		
Divorced/Separated	18	3.63	.822		

Table 4.45 reveal that the H_0 was supported which states that different marital status have no difference in levels of social influence.

Sub Hypothesis 3.4 Different education levels have different levels of social influence.

H_0: Different education levels have no difference in levels of social influence.

H_1: Different education levels have different levels of social influence.

Table 4.46 Comparison of Social Influence Categorized by Level of Education

Level of Education	Number of Respondents	Mean	Standard Deviation	F	Sig.
Lower than High School	4	4.16	.188	3.384*	.018
High School or Vocational School	66	3.51	.603		
Bachelor's Degree or equivalent	257	3.69	.655		
Higher than Bachelor's Degree	73	3.82	.658		

Note * Sig. < .05

Table 4.46 reveal that the H_0 was not supported which states that different education levels have different levels of social influence at the significance level of 0.05.

Sub Hypothesis 3.5 Different occupation have different levels of social influence.

H_0: Different occupation have no difference in levels of social influence.

H_1: Different occupation have different levels of social influence.

Table 4.47 Comparison of Social Influence Categorized by Occupation

Occupation	**Number of Respondents**	**Mean**	**Standard Deviation**	**F**	**Sig.**
Government official/employee	245	3.65	.629	1.839	.140
Private company employee	36	3.92	.590		
Investment fund officer	62	3.68	.733		
Employee	57	3.70	.667		

Table 4.47 reveal that the H_0 was supported which states that different occupation have no difference in levels of social influence.

Sub Hypothesis 3.6 Different work position have different levels of social influence.

H_0: Different work position have no difference in levels of social influence.

H_1: Different work position have different levels of social influence.

Table 4.48 Comparison of Social Influence Categorized by Position

Position	Number of Respondents	Mean	Standard Deviation	F	Sig.
Executive Level	13	3.59	.682	.521	.668
Middle Management Level	43	3.76	.505		
Lower Management Level	41	3.76	.645		
Operations Officer	303	3.67	.670		

Table 4.48 reveal that the H_0 was supported which states that different work position have no difference in levels of social influence.

Sub Hypothesis 3.7 Different work group/department have different levels of social influence.

H_0: Different work group/department have no difference in levels of social influence.

H_1: Different work group/department have different levels of social influence.

Table 4.49 Comparison of Social Influence Categorized by Work Group/Department

Work Group/Department	Number of Respondents	Mean	Standard Deviation	F	Sig.
Policy and Strategy	10	3.94	.438	1.788*	.028
Business Development and Resources	14	3.31	.537		
Airport and Aviation Standard	19	3.63	.469		
Troops	11	3.65	.553		
Communications and Information Technology	10	4.10	1.132		
Parcel and Service	35	3.48	.508		
Legal	5	3.48	.627		

Work Group/Department	Number of Respondents	Mean	Standard Deviation	F	Sig.
Finance	23	3.70	.571		
Administrative Affairs	29	3.95	.493		
Airport Operations	44	3.51	.712		
Engineering	106	3.73	.752		
Aviation	29	3.78	.497		
Business Development	7	4.13	.495		
Ground Staff	23	3.72	.704		
Security	7	3.88	.239		
Human Resources	7	3.54	.472		
Organization Communications	4	3.50	.654		
Products and Services	17	3.53	.542		

Note: * Sig. < .05

Table 4.49 reveal that the H_0 was not supported which states that different work group/department have different levels of social influence at the significance level of 0.05.

Sub Hypothesis 3.8 English skills have a relationship with social influence.

H_0: English skills have no relationship with social influence.

H_1: English skills have a relationship with social influence.

Table 4.50 Analysis of the Relationship between English Skills with Social Impact

Variable	Social Impact	
	r	Sig.
English Skills	.089	.074

Table 4.50 reveal that the H_0 was supported which states that English skills have no relationship with social influence.

Sub Hypothesis 3.9 Different income per month have different levels of social influence.

H_0: Different income per month have no difference in levels of social influence.

H_1: Different income per month have different levels of social influence.

Table 4.51 Comparison of Social Influence Categorized by Income per Month

Income per Month	Number of Respondents	Mean	Standard Deviation	F	Sig.
Less than 15,000 Baht	53	3.61	.682	1.456	.203
15,000 - 25,000 Baht	117	3.65	.670		
25,001 - 35,000 Baht	70	3.61	.568		
35,001 - 45,000 Baht	47	3.66	.755		
45,001 - 55,000 Baht	51	3.75	.544		
More than 55,000 Baht	62	3.87	.657		

Table 4.51 reveal that the H_0 was supported which states that different income per month have no difference in levels of social influence.

Sub Hypothesis 3.10 Different experience working in aviation industry have different levels of social influence.

H_0: Different experience working in aviation industry have no difference in levels of social influence.

H_1: Different experience working in aviation industry have different levels of social influence.

Table 4.52 Comparison of Social Influence Categorized by Experience Working in Aviation Industry

Experience Working in Aviation Industry	Number of Respondents	Mean	Standard Deviation	F	Sig.
Less than 1 year	39	3.67	.683	1.881	.132
More than 1 – 2 years	53	3.58	.670		
More than 2 - 5 years	93	3.60	.566		
More than 5 years	215	3.76	.670		

Table 4.52 reveal that the H_0 was supported which states that different experience working in aviation industry have no difference in levels of social influence.

Hypothesis 4 Different demographics have different facilitating factors.

Sub Hypothesis 4.1 Different gender have different facilitating factors.

H_0: Different gender have no difference in facilitating factors.

H_1: Different gender have different facilitating factors.

Table 4.53 Comparison of Facilitating Factors Categorized by Gender

Gender	Number of Respondents	Mean	Standard Deviation	t	Sig.
Male	252	3.78	.724	.604	.546
Female	148	3.73	.680		

Table 4.53 reveal that the H_0 was supported which states that different gender have no difference in facilitating factors.

Sub Hypothesis 4.2 Different age groups have different facilitating factors.

H_0: Different age groups have no difference in facilitating factors.

H_1: Different age groups have different facilitating factors.

Table 4.54 Comparison of Facilitating Factors Categorized by Age

Age	Number of Respondents	Mean	Standard Deviation	F	Sig.
15 - 24 years	38	3.64	.600	5.387*	.001
25 - 34 years	133	3.71	.738		
35 - 44 years	90	4.01	.712		
45 years and over	139	3.67	.668		

Note: * Sig. < .05

Table 4.54 reveal that the H_0 was not supported which states that different age groups have different facilitating factors at the significance level of 0.05.

Sub Hypothesis 4.3 Different marital status groups have different facilitating factors.

H_0: Different marital status groups have no difference in facilitating factors.

H_1: Different marital status groups have different facilitating factors.

Table 4.55 Comparison of Facilitating Factors Categorized by Marital Status

Marital Status	Number of Respondents	Mean	Standard Deviation	F	Sig.
Single	171	3.76	.707	.263	.769
Married	211	3.75	.711		
Divorced/Separated	18	3.87	.694		

Table 4.55 reveal that the H_0 was supported which states that different marital status groups have no difference in facilitating factors.

Sub Hypothesis 4.4 Different education levels have different facilitating factors.

H_0: Different education levels have no difference in facilitating factors.

H_1: Different education levels have different facilitating factors.

Table 4.56 Comparison of Facilitating Factors Categorized by Level of Education

Level of Education	Number of Respondents	Mean	Standard Deviation	F	Sig.
Lower than High School	4	2.67	.333	5.494*	.001
High School or Vocational School	66	3.61	.705		
Bachelor's Degree or equivalent	257	3.77	.708		
Higher than Bachelor's Degree	73	3.92	.652		

Note: * Sig. < .05

Table 4.56 reveal that the H_0 was not supported which states that different education levels have different facilitating factors at the significance level 0.05.

Sub Hypothesis 4.5 Different occupation have different facilitating factors.

H_0: Different occupation have no difference in facilitating factors.

H_1: Different occupation have different facilitating factors.

Table 4.57 Comparison of Facilitating Factors Categorized by Occupation

Occupation	Number of Respondents	Mean	Standard Deviation	F	Sig.
Government official/employee	245	3.73	.695	1.161	.324
Private company employee	36	3.80	.748		
Investment fund officer	62	3.71	.748		
Employee	57	3.91	.687		

Table 4.57 reveal that the H_0 was supported which states that different occupation have no difference in facilitating factors.

Sub Hypothesis 4.6 Different work position have different facilitating factors.

H_0: Different work position have no difference in facilitating factors.

H_1: Different work position have different facilitating factors.

Table 4.58 Comparison of Facilitating Factors Categorized by Position

Position	Number of Respondents	Mean	Standard Deviation	F	Sig.
Executive Level	13	3.60	.750	1.327	.265
Middle Management Level	43	3.71	.532		
Lower Management Level	41	3.95	.742		
Operations Officer	303	3.75	.721		

Table 4.58 reveal that the H_0 was supported which states that different work position have no difference in facilitating factors.

Sub Hypothesis 4.7 Different work group/department have different facilitating factors.

H_0: Different work group/department have no difference in facilitating factors.

H_1: Different work group/department have different facilitating factors.

Table 4.59 Comparison of Facilitating Factors Categorized by Work Group/Department

Work Group/Department	Number of Respondents	Mean	Standard Deviation	F	Sig.
Policy and Strategy	10	3.85	.419	1.507	.089
Business Development and Resources	14	3.39	.601		

Work Group/Department	Number of Respondents	Mean	Standard Deviation	F	Sig.
Airport and Aviation Standard	19	3.75	.453		
Troops	11	3.68	.529		
Communications and Information Technology	10	4.18	.983		
Parcel and Service	35	3.48	.768		
Legal	5	3.97	.415		
Finance	23	3.95	.686		
Administrative Affairs	29	4.06	.576		
Airport Operations	44	3.62	.773		
Engineering	106	3.78	.759		
Aviation	29	3.76	.599		
Business Development	7	3.90	.659		
Ground Staff	23	3.75	.850		
Security	7	3.93	.302		
Human Resources	7	3.55	.699		
Organization Communications	4	3.38	.927		
Products and Services	17	3.85	.533		

Table 4.59 reveal that the H_0 was supported which states that different work group/department have no difference in facilitating factors.

Sub Hypothesis 4.8 English skills have a relationship with facilitating factors.

H_0: English skills have no relationship with facilitating factors.

H_1: English skills have a relationship with facilitating factors.

Table 4.60 Analysis of the Relationship between English Skills with Facilitating Factors

Variables	Facilitating Factors	
	r	Sig.
English Skills	.017	.732

Table 4.60 reveal that the H_0 was supported which states that English skills have a relationship with facilitating factors.

Sub Hypothesis 4.9 Different income per month have different facilitating factors.

H_0: Different income per month have no difference in facilitating factors.

H_1: Different income per month have different facilitating factors.

Table 4.61 Comparison of Facilitating Factors Categorized by Income per Month

Income per Month	Number of Respondents	Mean	Standard Deviation	F	Sig.
Less than 15,000 Baht	53	3.69	.687	.933	.460
15,000 - 25,000 Baht	117	3.72	.746		
25,001 - 35,000 Baht	70	3.67	.734		
35,001 - 45,000 Baht	47	3.84	.795		
45,001 - 55,000 Baht	51	3.85	.634		
More than 55,000 Baht	62	3.86	.600		

Table 4.61 reveal that the H_0 was supported which states that different income per month have no difference in facilitating factors.

Sub Hypothesis 4.10 Different experience working in aviation industry have different facilitating factors.

H_0: Different experience working in aviation industry have no difference in facilitating factors.

H_1: Different experience working in aviation industry have different facilitating factors.

Table 4.62 Comparison of Facilitating Factors Categorized by Experience Working in Aviation Industry

Experience Working in Aviation Industry	Number of Respondents	Mean	Standard Deviation	F	Sig.
Less than 1 year	39	3.68	.700	1.109	.345
More than 1 – 2 years	53	3.64	.697		
More than 2 - 5 years	93	3.74	.724		
More than 5 years	215	3.81	.704		

Table 4.62 reveal that the H_0 was supported which states that different experience working in aviation industry have no difference in facilitating factors.

Hypothesis 5 Different demographics have different levels of digital literacy.

Sub Hypothesis 5.1 Different gender have different levels of digital literacy.

H_0: Different gender have no difference in levels of digital literacy.

H_1: Different gender have different levels of digital literacy.

Table 4.63 Comparison of Digital Literacy Categorized by Gender

Gender	Number of Respondents	Mean	Standard Deviation	t	Sig.
Male	252	3.31	.806	-3.496*	.001
Female	148	3.59	.647		

Note: * Sig. < .05

Table 4.63 reveal that the H_0 was not supported which states that different gender have different levels of digital literacy at the significance level of 0.05.

Sub Hypothesis 5.2 Different age groups have different levels of digital literacy.

H_0: Different age groups have no difference in levels of digital literacy.

H_1: Different age groups have different levels of digital literacy.

Table 4.64 Comparison of Digital Literacy Categorized by Age

Age	Number of Respondents	Mean	Standard Deviation	F	Sig.
15 - 24 years	38	3.42	.469	7.955*	.000
25 - 34 years	133	3.55	.712		
35 - 44 years	90	3.59	.890		
45 years and over	139	3.17	.726		

Note: * Sig. < .05

Table 4.64 reveal that the H_0 was not supported which states that different age groups have different levels of digital literacy at the significance level of 0.05.

Sub Hypothesis 5.3 Different marital status have different levels of digital literacy.

H_0: Different marital status have no difference in levels of digital literacy.

H_1: Different marital status have different levels of digital literacy.

Table 4.65 Comparison of Digital Literacy Categorized by Marital Status

Marital Status	Number of Respondents	Mean	Standard Deviation	F	Sig.
Single	171	3.47	.700	1.832	.161
Married	211	3.39	.812		
Divorced/Separated	18	3.13	.666		

Table 4.66 reveal that the H_0 was supported which states that different marital status have no difference in levels of digital literacy.

Sub Hypothesis 5.4 Different education levels have different levels of digital literacy.

H_0: Different education levels have no difference in levels of digital literacy.

H_1: Different education levels have different levels of digital literacy.

Table 4.66 Comparison of Digital Literacy Categorized by Level of Education

Level of Education	Number of Respondents	Mean	Standard Deviation	F	Sig.
Lower than High School	4	3.60	.095	6.500*	.000
High School or Vocational School	66	3.17	.693		
Bachelor's Degree or equivalent	257	3.39	.796		
Higher than Bachelor's Degree	73	3.71	.615		

Note: * Sig. < .05

Table 4.67 reveal that the H_0 was not supported which states that different education levels have different levels of digital literacy at the significance level of 0.05.

Sub Hypothesis 5.5 Different occupation have different levels of digital literacy.

H_0: Different occupation have no difference in levels of digital literacy.

H_1: Different occupation have different levels of digital literacy.

Table 4.67 Comparison of Digital Literacy Categorized by Occupation

Occupation	Number of Respondents	Mean	Standard Deviation	F	Sig.
Government official/employee	245	3.29	.807	5.946*	.001
Private company employee	36	3.72	.526		
Investment fund officer	62	3.61	.732		
Employee	57	3.53	.600		

Note: * Sig. < .05

Table 4.67 reveal that the H_0 was not supported which states that different occupation have different levels of digital literacy at the significance level of 0.05.

Sub Hypothesis 5.6 Different work position have different levels of digital literacy.

H_0: Different work position have no difference in levels of digital literacy.

H_1: Different work position have different levels of digital literacy.

Table 4.68 Comparison of Digital Literacy Categorized by Position

Position	Number of Respondents	Mean	Standard Deviation	F	Sig.
Executive Level	13	3.09	.713	3.068*	.028
Middle Management Level	43	3.60	.494		
Lower Management Level	41	3.63	.655		
Operations Officer	303	3.37	.799		

Note: * Sig. < .05

Table 4.68 reveal that the H_0 was not supported which states that different work position have different levels of digital literacy at the significance level of 0.05.

Sub Hypothesis 5.7 Different work group/department have different levels of digital literacy.

H_0: Different work group/department have no difference in levels of digital literacy.

H_1: Different work group/department have different levels of digital literacy.

Table 4.69 Comparison of Digital Literacy Categorized by Work Group/Department

Work Group/Department	Number of Respondents	Mean	Standard Deviation	F	Sig.
Policy and Strategy	10	3.79	.367	3.791*	.000
Business Development and Resources	14	3.10	.528		
Airport and Aviation Standard	19	3.21	.794		

Work Group/Department	Number of Respondents	Mean	Standard Deviation	F	Sig.
Troops	11	3.77	.542		
Communications and Information Technology	10	4.33	.412		
Parcel and Service	35	3.42	.590		
Legal	5	3.03	.546		
Finance	23	3.50	.698		
Administrative Affairs	29	3.87	.507		
Airport Operations	44	3.29	.705		
Engineering	106	3.18	.949		
Aviation	29	3.42	.559		
Business Development	7	4.11	.720		
Ground Staff	23	3.30	.699		
Security	7	3.80	.292		
Human Resources	7	3.61	.669		
Organization Communications	4	3.00	.889		
Products and Services	17	3.63	.375		

Note: * Sig. < .05

Table 4.69 reveal that the H_0 was not supported which states that different work group/department have different levels of digital literacy at the significance level of 0.05.

Sub Hypothesis 5.8 English skills have a relationship with digital literacy.

H_0: English skills have no relationship with digital literacy.

H_1: English skills have a relationship with digital literacy.

Table 4.70 Analysis of the Relationship between English Skills with Digital Literacy

Variables	Digital Literacy	
	r	Sig.
English Skills	.137*	.006

Note: * Sig. < .05

Table 4.70 reveal that the H_0 was not supported which states that English skills have a relationship with digital literacy at the significance level of 0.05.

Sub Hypothesis 5.9 Different income per month have different levels of digital literacy.

H_0: Different income per month have no difference in levels of digital literacy.

H_1: Different income per month have different levels of digital literacy.

Table 4.71 Comparison of Digital Literacy Categorized by Income per Month

Income per Month	Number of Respondents	Mean	Standard Deviation	F	Sig.
Less than 15,000 Baht	53	3.39	.556	5.226*	.000
15,000 - 25,000 Baht	117	3.63	.650		
25,001 - 35,000 Baht	70	3.18	.933		
35,001 - 45,000 Baht	47	3.13	.897		
45,001 - 55,000 Baht	51	3.37	.807		
More than 55,000 Baht	62	3.56	.604		

Note: * Sig. < .05

Table 4.71 reveal that the H_0 was not supported which states that different income per month have different levels of digital literacy at the significance level of 0.05.

Sub Hypothesis 5.10 Different experience working in aviation industry have different levels of digital literacy.

H_0: Different experience working in aviation industry have no difference in levels of digital literacy.

H_1: Different experience working in aviation industry have different levels of digital literacy.

Table 4.72 Comparison of Digital Literacy Categorized by Experience Working in Aviation Industry

Experience Working in Aviation Industry	Number of Respondents	Mean	Standard Deviation	F	Sig.
Less than 1 year	39	3.44	.542	3.664*	.013
More than 1 – 2 years	53	3.48	.737		
More than 2 - 5 years	93	3.61	.557		
More than 5 years	215	3.31	.857		

Note: * Sig. < .05

Table 4.72 reveal that the H_0 was not supported which states that different experience working in aviation industry have different levels of digital literacy at the significance level of 0.05.

Hypothesis 6 Digital media usage behavior has a relationship with operations staff expectations and innovation usage.

Sub Hypothesis 6.1 Objectives in using digital media has a relationship with operations staff expectations and innovation usage.

H_0: Objectives in using digital media has no relationship with operations staff expectations and innovation usage.

H_1: Objectives in using digital media has a relationship with operations staff expectations and innovation usage.

Table 4.73 Analysis of the Relationship between Objectives in Using Digital Media with Operations Staff Expectations and Innovation Usage

Variable	Operations Staff Expectations and Innovation Usage	
	r	Sig.
Objectives in Using Digital Media	.115*	.021

Note: * Sig. < .05

Table 4.74 reveal that the H_0 was not supported which states that objectives in using digital media has a relationship with operations staff expectations and innovation usage at the significance level of 0.05. It is a positive relationship and the relationship is at a very low level.

Sub Hypothesis 6.2 Activities in Using Digital Media has a relationship with Operations Staff Expectations and Innovation Usage.

H_0: Activities in Using Digital Media has no relationship with Operations Staff Expectations and Innovation Usage.

H_1: Activities in Using Digital Media has a relationship with Operations Staff Expectations and Innovation Usage.

Table 4.74 Analysis of the Relationship between Activities in Using Digital Media with Operations Staff Expectations and Innovation Usage

Variable	Operations Staff Expectations and Innovation Usage	
	r	Sig.
Activities in Using Digital Media	-.009	.851

Table 4.75 reveal that the H_0 was supported which states that activities in using digital media has no relationship with operations staff expectations and innovation usage.

Sub Hypothesis 6.3 Applications Used in Work has a relationship with Operations Staff Expectations and Innovation Usage.

H_0: Applications Used in Work has no relationship with Operations Staff Expectations and Innovation Usage.

H_1: Applications Used in Work has a relationship with Operations Staff Expectations and Innovation Usage.

Table 4.75 Analysis of the Relationship between Applications Used in Work with Operations Staff Expectations and Innovation Usage

Variable	**Operations Staff Expectations and Innovation Usage**	
	r	**Sig.**
Applications Used in Work	.070	.165

Table 4.75 reveal that the H_0 was supported which states that applications used in work has no relationship with operations staff expectations and innovation usage.

Hypothesis 7 Media usage behavior has a relationship with social impact.

Sub Hypothesis 7.1 Objectives in using digital media has a relationship with social impact.

H_0: Objectives in using digital media has no relationship with social impact.

H_1: Objectives in using digital media has a relationship with social impact.

Table 4.76 Analysis of the Relationship between Objectives in Using Digital Media with Social Impact

Variable	Social Impact	
	r	Sig.
Objectives in Using Digital Media	.249*	.000

Note: * Sig. < .05

Table 4.76 reveal that the H_0 was not supported which states that objectives in using digital media has a relationship with social impact at the significance level of 0.05. It is a positive relationship and the relationship is at a low level.

Sub Hypothesis 7.2 Activities in using digital media during work has a relationship with social impact.

H_0: Activities in using digital media during work has no relationship with social impact.

H_1: Activities in using digital media during work has a relationship with social impact.

Table 4.77 Analysis of the Relationship between Activities in Using Digital Media with Social Impact

Variable	Social Impact	
	r	Sig.
Activities in Using Digital Media	.055	.269

Table 4.77 reveal that the H_0 was supported which states that activities in using digital media during work has no relationship with social impact.

Sub Hypothesis 7.3 Applications used in work has a relationship with social impact.

H_0: Applications used in work has no relationship with social impact.

H_1: Applications used in work has a relationship with social impact.

Table 4.78 Analysis of the Relationship between Applications Used in Work with Social Impact

Variable	Social Impact	
	r	Sig.
Applications Used in Work	.046	.362

Table 4.78 reveal that the H_0 was supported which states that applications used in work has no relationship with social impact.

Hypothesis 8 Media usage behavior has a relationship with facilitating factors.

Sub Hypothesis 8.1 Objectives in using digital media has a relationship with facilitating factors.

H_0: Objectives in using digital media has no relationship with facilitating factors.

H_1: Objectives in using digital media has a relationship with facilitating factors.

Table 4.79 Analysis of the Relationship between Objectives in Using Digital Media with Facilitating Factors

Variable	Facilitating Factors	
	r	Sig.
Objectives in Using Digital Media	.172*	.001

Note: * Sig. < .05

Table 4.79 reveal that the H_0 was not supported which states that objectives in using digital media has a relationship with facilititaing factors at the

significance level of 0.05. It is a positive relationship and the relationship is at a very low level.

Sub Hypothesis 8.2 Activities in using digital media with facilitating factors.

H_0: Activities in using digital media has no relationship with facilitating factors.

H_1: Activities in using digital media has a relationship with facilitating factors.

Table 4.80 Analysis of the Relationship between Activities in Using Digital Media with Facilitating Factors

Variable	**Facilitating Factors**	
	r	**Sig.**
Activities in Using Digital Media	-.020	.683

Table 4.80 reveal that the H_0 was supported which states that activities in using digital media has no relationship with facilitating factors.

Sub Hypothesis 8.3 Applications used in work has a relationship with facilitating factors.

H_0: Applications used in work has no relationship with facilitating factors.

H_1: Applications used in work has a relationship with facilitating factors.

Table 4.81 Analysis of the Relationship between Applications Used in Work with Facilitating Factors

Variable	Facilitating Factors	
	r	Sig.
Applications Used in Work	.055	.276

Table 4.81 reveal that the H_0 was supported which states that applications used in work has no relationship with facilitating factors.

Hypothesis 9 Behavior in using digital media has a relationship with digital literacy.

Sub Hypothesis 9.1 Objectives in using digital media has a relationship with digital literacy.

H_0: Objectives in using digital media has no relationship with digital literacy.

H_1: Objectives in using digital media has a relationship with digital literacy.

Table 4.82 Analysis of the Relationship between Objectives in Using Digital Media with Digital Literacy

Variable	Digital Literacy	
	r	Sig.
Objectives in Using Digital Media	.721*	.000

Note: * Sig. < .05

Table 4.82 reveal that the H_0 was not supported which states that objectives in using digital media has a relationship with facilititaing factors at the significance level of 0.05. It is a positive relationship and the relationship is at a high level.

Sub Hypothesis 9.2 Activities in using digital media has a relationship with digital literacy.

H_0: Activities in using digital media has no relationship with digital literacy

H_1: Activities in using digital media has a relationship with digital literacy

Table 4.83 Analysis of the Relationship between Activities in Using Digital Media with Digital Literacy

Variable	**Digital Literacy**	
	r	**Sig.**
Activities in Using Digital Media	.845*	.012

Note: * Sig. < .05

Table 4.83 reveal that the H_0 was not supported which states that activities in using digital media has a relationship with digital literacy at the significance level of 0.05. It is a positive relationship and the relationship is at a very high level.

Sub Hypothesis 9.3 Applications used in work have a relationship with digital literacy.

H_0: Applications used in work have no relationship with digital literacy.

H_1: Applications used in work have a relationship with digital literacy.

Table 4.84 Analysis of the Relationship between Applications Used in Work with Digital Literacy

Variable	Digital Literacy	
	r	Sig.
Applications Used in Work	.764*	.00

Note: * Sig. < .05

Table 4.84 reveal that the H_0 was not supported which states that applications used in work has a relationship with digital literacy at the significance level of 0.05. It is a positive relationship and the relationship is at a very high level.

Hypothesis 10 Behavior in using digital media has a relationship with operations staff expectations and innovation usage, social impact, and facilitating factors have a relationship with digital literacy.

Sub Hypothesis 10.1 Media usage behavior has a relationship with digital literacy.

H_0: Media usage behavior has no relationship with digital literacy.

H_1: Media usage behavior has a relationship with digital literacy.

Table 4.85 Analysis of the Relationship between Media Usage Behavior with Digital Literacy

Variable	Digital Literacy	
	r	Sig.
Media Usage Behavior	.181*	.000

Note: * Sig. < .05

Table 4.85 reveal that the H_0 was not supported which states that media usage behavior has a relationship with digital literacy at the significance level of 0.05. It is a positive relationship and the relationship is at a very low level.

Sub Hypothesis 10.2 Operations staff expectations and innovation usage has a relationship with digital literacy.

H_0: Operations staff expectations and innovation usage has no relationship with digital literacy.

H_1: Operations staff expectations and innovation usage has a relationship with digital literacy.

Table 4.86 Analysis of the Relationship between Operations Staff Expectations and Innovation Usage with Digital Literacy

Variable	Digital Literacy	
	r	Sig.
Operations Staff Expectations and Innovation Usage	.656*	.000

Note: * Sig. < .05

Table 4.86 reveal that the H_0 was not supported which states that operations staff expectations and innovation usage has a relationship with digital literacy at the significance level of 0.05. It is a positive relationship and the relationship is at a high level.

Sub Hypothesis 10.3 Social impact has a relationship with digital literacy.

H_0: Social impact has no relationship with digital literacy.

H_1: Social impact has a relationship with digital literacy.

Table 4.87 Analysis of the Relationship between Social Impact with Digital Literacy

Variable	Digital Literacy	
	r	Sig.
Social Impact	.493*	.000

Note: * Sig. < .05

Table 4.87 reveal that the H_0 was not supported which states that social impact has a relationship with digital literacy at the significance level of 0.05. It is a positive relationship and the relationship is at a moderate level.

Sub Hypothesis 10.4 Facilitating factors have a relationship with digital literacy.

H_0: Facilitating factors have no relationship with digital literacy.

H_1: Facilitating factors have a relationship with digital literacy.

Table 4.88 Analysis of the Relationship between Facilitating Factors with Digital Literacy

Variable	**Digital Literacy**	
	r	**Sig.**
Facilitating Factors	.495*	.000

Note: * Sig. < .05

Table 4.88 reveal that the H_0 was not supported which states that facilitating factors has a relationship with digital literacy at the significance level of 0.05. It is a positive relationship and the relationship is at a moderate level.

4.2.2.2 Data Analysis for Prediction Model Using Multiple Regression

Digital literacy of the aviation labour force in Eastern Economic Corridor prediction model using multiple regression have important variables, which are media usage behavior, operations staff expectations and innovation usage, social impact, and facilitating factors. The results of the regression analysis is presented in the following section.

Table 4.89 Presents the Multiple Regression Analysis Results of Media Usage Behavior, Operations Staff Expectations and Innovation Usage, Social Impact, Facilitating Factors, and Digital Literacy

Independent Variables	Unstandardised Coefficients		Standardised Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.168	.228		.736	.462
Media Usage Behavior	.198	.055	.136	3.615	.000
Operations Staff Expectations and Innovation Usage	.659	.061	.611	10.808	.000
Social Impact	-.074	.076	-.063	-.975	.330
Facilitating Factors	.129	.064	.120	2.013	.045
R = .63 / Adjusted R^2 = .448 / F = 81.967*, Sig. = .000					

Note: * Sig. < .05

Table 4.89 the regression analysis results of digital literacy reveal that media usage behavior, operations staff expectations and innovation usage, and facilitating factors have a relationship with digital literacy at the significance level of 0.05. The regression model explains 44.8% variation in the variable digital literacy. The variable that has the most impact is operations staff expectations and innovation usage. This is followed by media usage behavior and facilitating factors respectively.

This could be explained categorized by variables as explained in the following section.

The operations staff expectations has a positive impact on digital literacy. The workforce in the aviation industry in the EEC have high expectations. They have better digital literacy than those workforce in the aviation industry in the EEC, who have low operations staff expectations and innovation usage.

Media usage behavior has a positive impact on digital literacy. Thus, workforce in the aviation industry in the EEC, who have high media usage behavior have better digital literacy than those, who rarely use media.

Facilitating factors have a positive impact on digital literacy. Thus, workforce in the aviation industry in the EEC, who have high level of facilitating factors have better digital literacy than those who have low level of facilitating factors.

Meanwhile, social impact has a negative effect on digital literacy. Thus, workforce in the aviation industry in the EEC, who have a high level of social impact have less digital literacy than those who have less social impact.

Regression model predicting digital literacy can be presented as follows:

Digital literacy = .168 + .198 Media Usage Behavior
+ .659 Operations Staff Expectations and Innovation Usage
-.074 Social Impact
+ .129 Facilitating Factors

CHAPTER 5

CONCLUSION, DISCUSSION AND RECOMMENDATIONS

The research titled; “Digital Literacy of the Aviation Labour Force in Eastern Economic Corridor” has the research objectives as follows:

1) To study the current situation of the aviation industry in Eastern Economic Corridor.

2) To analyze the main factors that affect the digital literacy of the aviation labour forces in Eastern Economic Corridor.

3) To examine the correlation of the main factors that affect the digital literacy of the aviation labour forces in Eastern Economic Corridor.

It was a mixed method research divided into 2 parts. The first part is a qualitative research studied from documents and in-depth interview regarding the current condition of the aviation industry in Eastern Economic Corridor. The questionnaire was then designed. The second part is a quantitative research. It is a one-shot description study. The analysis revealed the correlation of the main factors that affect the digital literacy of those labour forces. The questionnaire was collected from 400 respondents from the aviation labour force during January - April 2020.

5.1 Conclusion

Part 1 To study the current situation of the aviation industry in Eastern Economic Corridor

1) Aviation industry in Eastern Economic Corridor

The aim of this project was to promote the area of 2,600 acres (6,500 rai) to be the city of the aviation in the East and the centre of the aviation in the region on par with the world standard. In addition, it aims to support the growth of the aviation industry including role as the centre of knowledge and technology management in the future.

For the roles of U-Tapao Rayong-Pattaya International Airport in the future, it is in the period of transition of the management responsibility from the Royal Thai Navy to the private sectors, Eastern Aviation City Project and Aeronautical Radio Company of Thailand. The Royal Thai Navy will take care the airport for the security and some of the commercial events.

U-Tapao Rayong-Pattaya International Airport is a strategic location. It is appropriated for the aviation industry of the region not only for the security but for the commercial events as well. It is the air transportation business centre of the East. This is because of the expansive area both the airport itself and the area around. Thus, it could be developed according to the government projects, like Eastern Economic Corridor Development Project. The area is well equipped with basic facilities. It is the hub of land, sea, and air transportation, which is appropriated for investment to the world competition and for the sustainable development of the country.

2) Digital literacy of the aviation labour force in Eastern Economic Corridor

(1) Access

Access to digital technology for use in the development of good digital skills is necessary. However, the organization does not provide widespread support. Therefore, there is still complications in accessing the Internet resulting in slow development.

(2) Knowledge

Knowledge about digital technology is integral to the aviation industry. The limitation regarding the standards within the industry is clearly defined both at the national and international level. The knowledge needs to be generated from the cooperation among various parties in terms of policy at the national level, whose operations are made based on the policies. The workforce needs to comply with the policies. This is because the knowledge of the workers is not compliant with the needs of the organization resulting from the lack of labourers and experts, who would monitor the use of technology. Consequently, this impacts the development of digital skills for workers at different levels. Moreover, this encompasses the problems arising from age differences among the workers at the operations level. It has an impact on different levels that impacts on the learning of individuals. For instance, the

Baby Boomers (born between 1946 – 1964), who are the majority of the workers in the aviation industry, do not have the motivation to search for additional information and skills. They do not have the drive for self development. This is because they do not have much time left in their careers. In addition, their language skills are at a moderate level, which is a major obstacle to finding additional knowledge. Language skills is a crucial factor for working in the aviation industry.

(3) Understanding

The understanding of digital technology has an impact on operational decisions, which leads to optimal effective performance. Labourers, who do not understand the change from traditional to digital systems, cause the work performance effectiveness to miss the goals set by the organization. This includes the lack of acknowledgement of the value of digital technologies that can improve the work performance. Consequently, this leads to a direct effect on the performance of the organization.

(4) Usage

The use of digital technologies can significantly help to improve the work performance. This includes the use in communications and reporting. However, such skills are not widely available in the aviation industry. This includes problems in organizational internal communications resulting in misunderstandings between individuals in different levels of the management hierarchy, which impacts the use of digital technology to its full potential.

3) The infrastructure of U-Tapao Rayong-Pattaya International Airport

U-Tapao Rayong-Pattaya International Airport has been the base of Royal Thai Navy for the national air and marine security and other missions up to the government policy, such as supporting military forces, and partnership countries. It is also a base for relieving national disasters and the region. This includes being the reserve airport for Suvarnabhumi and Don Mueang International Airports.

The government has set a project to develop U-Tapao Rayong-Pattaya International Airport to be the third international airport of Bangkok. It would be done by developing the area of 2,500 acres in the east of the airport to be Eastern Airport City for the aviation, and communication hub of the region. This project has been a

part of the Eastern Economic Corridor. The project includes Airport Link to link Suvarnabhumi International Airport, Don Mueang International Airport and U-Tapao Rayong-Pattaya International Airport for reducing the passenger density of the airlines in Bangkok. The international airport is also being prepared for the increase in air traffic in the future.

U-Tapao Rayong-Pattaya International Airport has divided the services into 2 parts.

(1) For the security, to prepare the airport infrastructure for supporting Royal Thai Navy operation. This includes both the navy and the air navy for the national sovereignty and marine benefits. To serve state aircrafts for Thais and partner countries in training, battle, and maintenance.

(2) For the commercialisation, to serve the aviation transportations and other aviation operations such as agricultural product transportation, industrial products, MRO. In the future, it can be developed to multi modal to link deep sea ports, roads and rail roads when Suvarnabhumi International Airport and Don Mueang International Airport are unavailable.

Part 2 Factors affecting the digital literacy of the aviation labour force in Eastern Economic Corridor

The characteristics of the population revealed that the major group was male over 45 years old, married, got a bachelor degree, government operators in engineering departments, fair English skills, 15,000-25,000 baht per month, and over 5 years experiences in the aviation industry.

The majority of the respondents spent their time for the digital media 4-6 hours a day for daily news. They use their smart phones during their operating for fulfilling their jobs through the Line application.

The majority of the respondents were keen in using computers and accessing the sources through the applications, and could process the sources for presenting both on line and e-mails.

The majority of the respondents believed that they would gain more digital literacy benefit, more effective operations, and development of units under the condition provided the digital software and hardware effectively.

Part 3 The correlation of the main factors that affect the digital literacy of the aviation labour force in Eastern Economic Corridor

1) Hypothesis 1 Different demographics had different media use behaviours.

Sub hypothesis 1.1 Different genders had different media use behaviors. It was found that there was no difference among the different genders.

Sub hypothesis 1.2 Different ages had different media use behaviors. It was found that there were significant differences among the different ages at 0.05 level.

Sub hypothesis 1.3 Different marital status had different media use behaviors. It was found that there were significant differences among the different marital status at 0.05 level.

Sub hypothesis 1.4 Different education levels had different media use behaviors. It was found that there were significant differences among the different education levels at 0.05 level.

Sub hypothesis 1.5 Different occupations had different media use behaviors. It was found that there were significant differences among the different occupations at 0.05 level.

Sub hypothesis 1.6 Different job positions had different media use behaviors. It was found that there was no difference among the different job positions.

Sub hypothesis 1.7 Different job departments had different media use behaviors. It was found that there were significant differences among the different job departments at 0.05 level.

Sub hypothesis 1.8 Different English skills had different media use behaviors. It was found that there were significant differences among the different English skills at 0.05 level. The positive correlation was at a low level.

Sub hypothesis 1.9 Different income had different media use behaviors. It was found that there were significant differences among the different income at 0.05 level.

Sub hypothesis 1.10 Different job experiences had different media use behaviors. It was found that there were significant differences among the different job experiences at 0.05 level.

The demographic factors that affected media use behaviours were ages, marital status, occupations, job departments, English skills, income and job experiences. Meanwhile there were no impact in the factors of gender, education levels, and job positions.

2) Hypothesis 2 Different demographics had different performance and innovation effort expectations.

Sub hypothesis 2.1 Different genders had different performance and innovation effort expectations. It was found that there was no difference among the different genders.

Sub hypothesis 2.2 Different ages had different performance and innovation effort expectations. It was found that there was no difference among the different ages.

Sub hypothesis 2.3 Different marital status had different performance and innovation effort expectations. It was found that there was no difference among the different marital status.

Sub hypothesis 2.4 Different education levels had different performance and innovation effort expectations. It was found that there were significant differences among the different education levels at 0.05 level.

Sub hypothesis 2.5 Different occupations had different performance and innovation effort expectations. It was found that there were significant differences among the different occupations at 0.05 level.

Sub hypothesis 2.6 Different job positions had different performance and innovation effort expectations. It was found that there were significant differences among the different job positions at 0.05 level.

Sub hypothesis 2.7 Different job departments had different performance and innovation effort expectations. It was found that there were significant differences among the different job departments at 0.05 level.

Sub hypothesis 2.8 Different English skills had different performance and innovation effort expectations. It was found that there was no difference among the different English skills.

Sub hypothesis 2.9 Different income had different performance and innovation effort expectations. It was found that there were significant differences among the different income at 0.05 level.

Sub hypothesis 2.10 Different job experiences had different performance and innovation effort expectations. It was found that there was no difference among the different job experiences.

The demographic factors that affected the performance and innovation effort expectations were education levels, occupations, job positions, and income. Meanwhile there were no effects in the factors of gender, age, marital status, English skills, and job experiences.

3) Hypothesis 3 Different demographics had different social influence.

Sub hypothesis 3.1 Different genders had different social influences. It was found that there was no difference among the different genders.

Sub hypothesis 3.2 Different ages had different social influences. It was found that there were significant differences among the different ages at 0.05 level.

Sub hypothesis 3.3 Different marital status had different social influences. It was found that there was no difference among different the marital status.

Sub hypothesis 3.4 Different education levels had different social influences. It was found that there were significant differences among the different education levels at 0.05 level.

Sub hypothesis 3.5 Different occupations had different social influences. It was found that there were significant differences among the different occupations at 0.05 level.

Sub hypothesis 3.6 Different job positions had different social influences. It was found that there was no difference among the different job positions.

Sub hypothesis 3.7 Different job departments had different social influences. It was found that there were significant differences among the different job departments at 0.05 level.

Sub hypothesis 3.8 Different English skills had different social influences. It was found that there was no difference among the different English skills.

Sub hypothesis 3.9 Different income had different social influences. It was found that there were significant differences among the different income at 0.05 level.

Sub hypothesis 3.10 Different job experiences had different social influences. It was found that there was no difference among the different job experiences.

The demographic factors that affected the social influences were ages, education levels and job departments. Meanwhile there were no effects in the factors of gender, marital status, occupations, job positions, English skills, income, and job experiences.

4) Hypothesis 4 Different demographics had different facilities condition.

Sub hypothesis 4.1 Different genders had different facilities condition. It was found that there was no difference among the different genders.

Sub hypothesis 4.2 Different ages had different facilities condition. It was found that there were significant differences among the different ages at 0.05 level.

Sub hypothesis 4.3 Different marital status had different facilities condition. It was found that there was no difference among the different marital status.

Sub hypothesis 4.4 Different education levels had different facilities condition. It was found that there were significant differences among the different education levels at 0.05 level.

Sub hypothesis 4.5 Different occupations had different facilities condition. It was found that there was no difference among the different occupations.

Sub hypothesis 4.6 Different job positions had different facilities condition. It was found that there was no difference among the different job positions.

Sub hypothesis 4.7 Different job departments had different facilities condition. It was found that there was no difference among the different job departments.

Sub hypothesis 4.8 Different English skills had different facilities condition. It was found that there was no difference among the different English skills.

Sub hypothesis 4.9 Different income had different facilities condition. It was found that there was no difference among the different income.

Sub hypothesis 4.10 Different job experiences had different facilities condition. It was found that there was no difference among the different job experiences.

The demographic factors that affected the facilities condition were ages and education levels. Meanwhile there were no effects in the factors of gender, marital status, occupations, job positions, job departments, English skills, income and job experiences.

5) Hypothesis 5 Different demographics had different digital literacy.

Sub hypothesis 5.1 Different genders had different digital literacy. It was found that there were difference among the different digital literacy at 0.05 level.

Sub hypothesis 5.2 Different ages had different digital literacy. It was found that there were difference among the different ages at 0.05 level.

Sub hypothesis 5.3 Different marital status had different digital literacy. It was found that there was no difference among the different marital status.

Sub hypothesis 5.4 Different education levels had different digital literacy. It was found that there were difference among the different education levels at 0.05 level.

Sub hypothesis 5.5 Different occupations had different digital literacy. It was found that there were difference among the different occupations at 0.05 level.

Sub hypothesis 5.6 Different job positions had different digital literacy. It was found that there were difference among the different job positions at 0.05 level.

Sub hypothesis 5.7 Different job departments had different digital literacy. It was found that there were difference among the different job departments at 0.05 level.

Sub hypothesis 5.8 Different English skills had different digital literacy. It was found that there were difference among the different English skills at 0.05 level.

Sub hypothesis 5.9 Different income had different digital literacy. It was found that there were difference among the different income at 0.05 level.

Sub hypothesis 5.10 Different job experiences had digital literacy. It was found that there were difference among the different job experiences at 0.05 level.

The demographic factors affected the digital literacy were gender, age, education levels, occupations, job positions, job departments, English skills, income, and job experiences. Meanwhile there was no effect in marital status.

6) Hypothesis 6 Digital media usage behaviours correlated with performance and innovation effort expectations.

Sub hypothesis 6.1 The purpose of using digital media correlated with the performance and innovation effort expectations. It was found that the correlation was positive at 0.05 level and it was a very low level.

Sub hypothesis 6.2 The online media activities during work correlated with the performance and innovation effort expectations. It was found that there was no correlation.

Sub hypothesis 6.3 The application used during work correlated with the performance and innovation effort expectations. It was found that there was no correlation.

The digital media usage behaviours correlated with the purpose of using digital media. Meanwhile there was no correlation with online media activities and the application used during work.

7) Hypothesis 7 Digital media usage behaviours correlated with social influences.

Sub hypothesis 7.1 The purpose of using digital media correlated with the social influences. It was found that the correlation was at 0.05 level. It was a positive and low correlation.

Sub hypothesis 7.2 The online media activities during work correlated with the social influences. It was found that there was no correlation.

Sub hypothesis 7.3 The application used during work correlated with the social influences. It was found that there was no correlation.

The digital media usage behaviours correlated with the purpose of using digital media. Meanwhile there was no correlation with the online media activities and application used during work.

8) Hypothesis 8 Digital media usage behaviours correlated with the facilities condition.

Sub hypothesis 8.1 The purpose of using digital media correlated with the facilities condition. It was found that the correlation was at 0.05 level. It was a positive and low level.

Sub hypothesis 8.2 The online media activities during work correlated with the facilities condition. It was found that there was no correlation.

Sub hypothesis 8.3 The application used during work correlated with the facilities condition. It was found that there was no correlation.

The digital media usage behaviours correlated with the purpose of using digital media. Meanwhile there was no correlation with the online media activities and application used during work.

9) Hypothesis 9 Digital media usage behaviours correlated with the digital literacy.

Sub hypothesis 9.1 The purpose of using digital media correlated with the digital literacy. It was found that the correlation was at 0.05 level. It was a positive and high level.

Sub hypothesis 9.2 The online media activities during work correlated with the digital literacy. It was found that the correlation was at 0.05 level. It was a positive and very high level.

Sub hypothesis 9.3 The application used during work correlated with the digital literacy. It was found that the correlation was at 0.05 level. It was a positive and high level.

The digital media usage behaviours correlated with the purpose of using digital media, the online media activities and the application used during work.

10) Hypothesis 10 Digital media usage behaviours, performance and innovation effort expectations, social influences, and facilities condition correlated with the digital literacy.

Sub hypothesis 10.1 The digital media usage behaviours correlated with the digital literacy. It was found that the correlation was at 0.05 level. It was a positive and very low level.

Sub hypothesis 10.2 The performance and innovation effort expectations correlated with the digital literacy. It was found that the correlation was at 0.05 level. It was a positive and very high level.

Sub hypothesis 10.3 The social influences correlated with the digital literacy. It was found that the correlation was at 0.05 level. It was a positive and moderate level.

Sub hypothesis 10.4 The facilities condition correlated with the digital literacy. It was found that the correlation was at 0.05 level. It was a positive and moderate level.

The digital media usage behaviours, performance and innovation effort expectations, social influences, and facilities condition correlated with the digital literacy.

5.2 Discussion

The study titled, “Digital Literacy of the Aviation Labour Force in Eastern Economic Corridor” presents the discussion of research findings based on the research objectives in the following section.

Part 1 To study the current situation of the aviation industry in Eastern Economic Corridor

1) Aviation industry in Eastern Economic Corridor

The objective of the aviation industry in the development of the Eastern Economic Corridor is the creation of the Eastern Aviation City Project to become the regional aviation hub that meets the global world standard. This is done to serve the future growth in the aviation industry. In addition, the goal is to be the center for knowledge management and disseminate technology knowledge to

personnel in the country. This is in line with Bardai, A. M. et al. (2017), who studied the Kuala Lumpur International Airport in the context of serving the aviation traffic in the Southeast Asian region, which has intense competition. Disregarding the geographic location, consumers have a variety of choices. As a result, airports need to provide amenities for travelers' convenience such as Wi-Fi services, duty free shopping, as well as special tax benefits for businesses. Thus, airport service providers need to be ready to continuously develop and promote new experiences for those using the airports.

2) The Aviation Industry in the Eastern Economic Corridor has advantage in terms of geographic location, when compared to other countries in the ASEAN region. It can be observed that foreign investors have shown continuous overwhelming interest to bid in the land development. This is a good direction for the management of the land management in the aviation industry. As a result, the future of this industry requires a large number of dedicated workforce, which would propel the salaries of the labourers to be higher without doubt.

3) Digital literacy of the aviation labour force in Eastern Economic Corridor

(1) Access

The access to digital technology for development benefits requires the appropriate digital skills. However, the organization does not support widespread development. Yet there are complications in accessing the Internet, which results in the slow development. This is in line with Poomai (2016), who found that the management of organization is the most important component. This organization management includes the support for the continuous development of the workforce. Consequently, motivation and structure are the subsequent important factors, which lead to the development of the workforce potential as well as competitiveness of the organization. This would eventually lead to the adaptation that enables handling the changes and challenges in the future.

(2) Knowledge

Knowledge about digital technology is integral to the aviation industry. The limitation regarding the standards within the industry is clearly defined both at the national and international level. The knowledge needs to be generated

from the cooperation among various parties in terms of policy at the national level, whose operations are made based on the policies. The workforce needs to comply with the policies. This is because the knowledge of the workers is not compliant with the needs of the organization resulting from the lack of labourers and experts, who would monitor the use of technology. Consequently, this impacts the development of digital skills for workers at different levels. Moreover, this encompasses the problems arising from age differences among the workers at the operations level. It has an impact on different levels that impacts on the learning of individuals. For instance, the Baby Boomers (born between 1946 – 1964), who are the majority of the workers in the aviation industry, do not have the motivation to search for additional information and skills. They do not have the drive for self development. This is because they do not have much time left in their careers. In addition, their language skills are at a moderate level, which is a major obstacle to finding additional knowledge. Language skills is a crucial factor for working in the aviation industry. This is in line with Bejaković and Mrnjavac (2020), which explained that the development of knowledge in terms of digital literacy supports strengthening of the workforce. When labourers have the knowledge and understanding as well as interpretation of information received, this would promote self-learning. In addition, they can continuously train digital literacy skill, which leads to the expertise in their field of work.

(3) Understanding

The understanding of digital technology has an impact on operational decisions, which leads to optimal effective performance. Research findings indicate that the understanding of digital technology of the workforce is at a moderate level. This is in line with Mc Adam et al. (2016), which explained that personnel management creating a common understanding among all units is difficult to attain. This is because expertise of each unit differ significantly. The solution to this problem is made through training and seminars of the workforce in the units that need to work together. This has to include activities that facilitate relationship within the organization. This includes citing examples from the current situation, which encompasses solution to problems in a timely manner. It is important to engage in activities that are not too long to avoid boredom and refusal to cooperate in the future.

(4) Usage

The use of digital technologies can significantly help to improve the work performance. This includes the use in communications and reporting. This is in line with Trakanchan (2017), who explained that means for digital learning among the workforce includes the development of the Internet signal to be more effective and inability to provide sufficient technology equipment to support workforce operations. The development of technology skills to achieve expertise would lead to the most effective performance. However, the qualitative research results reveal that the use of digital technology is only at the basic level. This includes using Line mostly to communicate. However, work in the aviation industry requires the use of specific applications serving the industry. Yet most of them use Line at a high level. On the other hand, industry specific applications such as Windy and AeroWeather, which are used to predict weather conditions, and Flightradar24 and FlightAware, which track flights in real time and search for flights en route, are used at a very low level. Thus, it can be said that they have high digital skills but lack other skills, which would be explained in the following section.

4) The Infrastructure of U-Tapao Rayong-Pattaya International Airport

The U-Tapao International Airport is managed by the Management Committee of the U-Tapao Airport appointed by the Royal Thai Navy, which collaborates with the Commercial Aviation Department. Later there was an establishment of the Airport Unit of U-Tapao Airport, which is the third commercial airport of Thailand. This is in line with the study conducted by Setiawan et al. (2018), which explained that the Indonesian airport is operated under the supervision of the government. It is a collaboration between the government, the private sector, and the military. The research findings indicate that the successful management of the business development of the airport to grow commercially could be achieved through collaboration between the government and the private sector. This includes the development infrastructure both in and around the airport. The development of commercial real estate including offices, hotels, and retail stores. These components help the airport become an international hub under the management of the Royal Thai

Navy. This airport has two main missions. It has to be managed to be more than just a commercial airport otherwise the development towards modernization would be slow.

Part 2 Factors affecting the digital literacy of the aviation labour force in Eastern Economic Corridor

The research findings indicate that most of the respondents believe they would benefit from digital technology. If they had good digital literacy performance effectiveness would improve. Digital technology propels the development of the organization, when the organization can prepare the necessary equipment resulting in better skills.

This is in line with the innovation diffusion proposed by Roger (2003) explaining changes in society and culture that results from the diffusion of innovation in one society to another. The innovation is defined as the concepts, actions, and new objects used by individuals. The benefits should be in line with the culture, not complex, and can easily be adopted in that particular society through communication channels between the sender and receiver at any given point in time. This would lead to the acknowledgment of economic benefits. The process takes time for people to adapt. In addition, it is necessary for the social system to be conducive for rapid dissemination.

The respondents believe that they would benefit from the use of digital technology. This leads to the diffusion of technology for benefits, which leads to better skills that promote effective work performance. It would also propel the organization to develop, however, the organization needs to prepare the equipment for the workforce.

Part 3 The correlation of the main factors that affect the digital literacy of the aviation labour force in Eastern Economic Corridor

1) Hypothesis 1 Different demographics had different media use behaviours.

The research findings indicate that respondents with different demographics have different media use behaviors. These demographic factors include age, marital status, occupation, work/department, English language skills, average income per month, and work experience. This is in line with the 2020 household survey on the use of information and communication technology by the National

Statistical Office of Thailand (2021), which explained that the younger population use computers more than older groups. The working age population use Internet the most. In addition, this group are state enterprise workforce, who use information technology more than other occupations. The objective is to use different types of equipment such as computers to search for information or smartphones for accessing social networks. It can be observed that different demographic factors such as age, marital status, occupation, work/department, English language skills, average income per month, and work experience have an influence on behaviors. This is dependent on the characteristics of each individual.

2) Hypothesis 2 Different demographics had different performance and innovation effort expectations.

The research findings indicate that demographics have an impact on the expectations of the workforce and use innovation such as age, marital status, occupation, work/department, English language skills, and average income per month. This is in line with the Information Technology Perspectives Impact on New Media proposed by William (1992, as cited in Kaewthep & Chaikhunpol, 2012). The theory explains the transition from transportation to communications. Smartphones today are important to communications, selection of products, doing business, as well as doing financial transactions. Individuals no longer have to travel to many locations to perform the various tasks. In addition, digital technology has the role as a tool to kill free time work. Today this free time is spent on digital technology to perform various activities. This impacts individuals, who use digital technology in various activities, to have digital literacy.

3) Hypothesis 3 Different demographics had different social influence.

The research findings indicate that age, marital status, occupation, and work/department have an impact on society. This is in line with digital literacy concept proposed by ICDL Thailand (2018), which explains the capabilities of using digital technology. Individuals, who have digital technology skills, receive the highest benefits in communications, work performance, and cooperation in the organization to develop the work process to be more modern and effective. This would lead to the industry's workforce to have good digital literacy resulting in less error in the work

performance. Each error is a costly mistake and might have an impact on the safety of the workers and those using the service.

4) Hypothesis 4 Different demographics had different facilities condition.

The research findings indicate that different demographics have different facilitating conditions such as age and level of education. This is in line with the 2020 household survey on the use of information and communication technology of the National Statistical Office of Thailand (2021). It is found that the younger population use computers more than older groups. The working age population use Internet the most. In addition, this group are state enterprise workforce, who use information technology more than other occupations. The objective is to use different types of equipment such as computers to search for information or smartphones for accessing social networks. It can be observed that different demographic factors such as age, marital status, occupation, work/department, English language skills, average income per month, and work experience have an influence on behaviors. This is dependent on the characteristics of each individual.

5) Hypothesis 5 Different demographics had different digital literacy.

The research findings indicate that different demographics have different levels of digital literacy such as age, level of education, occupation, work/department, English language skills, average income per month, and work experience. This is in line with Worapoj Wongkitrungrueng (2018), who explained the skills and basic knowledge in ICT literacy, which is an important skill for digital citizens. It is important to the selection and use of technology to serve the needs of individuals in their daily lives in order to achieve their highest work performance through the suitable use of information. Different demographics have an impact to the skill level of individuals. However, they need to be on top of the changes in digital technology and its use for lifelong learning.

6) Hypothesis 6 Digital media usage behaviours correlated with performance and innovation effort expectations.

The research findings indicate that expectations of work performance and usage of innovation to achieve objectives in using digital technology. This is in line with Worapoj Wongkitrungrueng (2018), who explained the skills and basic

knowledge in ICT literacy, which is an important skill for digital citizens. It is important to the selection and use of technology to serve the needs of individuals in their daily lives in order to achieve their highest work performance through the suitable use of information. Different demographics have an impact to the skill level of individuals. However, they need to be on top of the changes in digital technology and its use for lifelong learning.

7) Hypothesis 7 Digital media usage behaviours correlated with social influences.

The research findings indicate that media usage behaviors are correlated with social influences to achieve objectives in using digital technology. This is in line with Worapoj Wongkitrungrueng (2018), who explained the skills and basic knowledge in ICT literacy, which is an important skill for digital citizens. It is important to the selection and use of technology to serve the needs of individuals in their daily lives in order to achieve their highest work performance through the suitable use of information. Different demographics have an impact to the skill level of individuals. However, they need to be on top of the changes in digital technology and its use for lifelong learning.

8) Hypothesis 8 Digital media usage behaviours correlated with the facilities condition.

The research findings indicate that media usage behaviors are correlated with facilitating conditions to achieve objectives in using digital technology. This is in line with Worapoj Wongkitrungrueng (2018), who explained the skills and basic knowledge in ICT literacy, which is an important skill for digital citizens. It is important to the selection and use of technology to serve the needs of individuals in their daily lives in order to achieve their highest work performance through the suitable use of information. Different demographics have an impact to the skill level of individuals. However, they need to be on top of the changes in digital technology and its use for lifelong learning.

9) Hypothesis 9 Digital media usage behaviours correlated with the digital literacy.

The research findings indicate that digital media usage behaviors are correlated with digital literacy in every aspect. This includes digital media usage

behaviors, activities in using digital media, and application usage during work. This is in line with Mikhaleva (2016), which indicated that those who use media intensively would have a high level of media literacy. They are capable to use digital technology effectively. They use high quality media, know how to secure their data online, and use digital technology for the utmost benefit to themselves and society.

10) Hypothesis 10 Digital media usage behaviours, performance and innovation effort expectations, social influences, and facilities condition correlated with the digital literacy.

The research findings indicate that digital media usage behaviors, performance and innovation effort expectations, social influences, and facilitating conditions are correlated to digital literacy. This is in line with Mikhaleva (2016), which indicated that those who use media intensively would have a high level of media literacy. They are capable to use digital technology effectively. They use high quality media, know how to secure their data online, and use digital technology for the utmost benefit to themselves and society.

5.3 Recommendations

5.3.1 Academic Contribution

1) This research broadens the knowledge and understanding about digital literacy of the aviation labour force in the Eastern Economic Corridor. Therefore, future students can examine other aviation industry locations to analyze and compare the related as well as different factors.

2) The data collection of this research was conducted prior to the spread of the Covid-19 epidemic. Thus, in terms of digital literacy of people in society and social context as well as social distancing reducing human touch, there has been rapid advancement. This is one of the limitations of this study. Therefore, interested researchers can use data collected after the spread of Covid-19 to compare the results before and after the epidemic. In addition, there could be examination of other industries such as logistics or even expanding the geographic location to better understand the industries at the national level.

5.3.2 Policy Contributions

The world today is going through a period of transition into a fully digital society. As a result, the social systems have to be upgraded in the process of digital transformation in order to keep up with the changes shaping the world. Digital transformation is a topic that has been discussed for a period of time. The Covid-10 spread is an important factor that has led to rapid changes. Thailand has also recognized the importance of changes by developing the 20-year National Strategy in order to set the transition for Thailand 4.0, which sets the policy that would drive communications. This would create an understanding for the workforce. The research findings are presented in terms of policy in four parts as discussed in the following section.

1) The relevant agencies in the aviation industry in the Eastern Economic Corridor including government agencies such as the Royal Thai Navy or the private sectors related with the aviation industry. It is crucial to acknowledge the importance of digital literacy in order to drive the organization in the fully digital society. The work process can be presented in three formats as follows:

(1) Setting up the learning center for the workforce. Each of the organizations have to be responsible for digital literacy. It must not be influenced by other tasks in the organization. The goal is to create a good environment for the workforce, where they can ask and consult about problems arising from digital technology. This is in line with the research findings that indicate that workers do not have skills because they lack the knowledge and understanding of digital technology. Thus, they are discouraged and fail to develop themselves. The establishment of a dedicated unit that handles contact, queries, and learning. This promotes the workforce to use digital technology effectively, thus eventually they are open to use digital technology.

(2) Organize continuous training and tracking. The organization should plan effective training, measurement, and evaluation. It is necessary to have clear KPI in terms of digital technology usage. This would stimulate the workforce to try to understand and use technology to its utmost potential.

(3) Provide rewards and create motivation that leads to positive reinforcement for the workforce. The organization can support the expenses for the

training of the skills such as the cost for table or Internet package. In addition, there should be promotion of acknowledgement of the continuous care the organization has for the workforce.

2) The creation of the culture that promotes digital literacy. The organization has to create an environment that is continuously conducive and supportive of learning at the level of the individual. The organization has to create understanding, knowledge, and benefits of digital literacy. This includes the atmosphere that supports mutual learning, ensuring that there are no differences between age groups. In work, there would be people of different age groups. Thus, the head of the unit should create an environment for all such as a buddy system so they would support one another in the team. The organization should also have a support system to support this process.

The organization should develop to become a model of a learning organization in terms of digital literacy. It is crucial to establish the knowledge-based learning centre. It should be a pilot project in the development of the digital society. This includes the development of the workforce on par with the international standard. The goal is to push the unskilled labor to become the skilled labor that would lead to the economic development of the country in the future.

APPENDIX

Questionnaire subject: Digital Literacy of the Aviation Labour Force in Eastern Economic Corridor

Instruction

This questionnaire is part of the Doctor of Philosophy (Communication Arts and Innovation), the Graduate School of Communication Arts and Management Innovation, National Institute of Development Administration

The data collection from this questionnaire was randomized. All personal information will be kept confidential. Please answer the following questions truthfully or in your opinion.

Section 1 Respondents Demographics

1. Gender

☐ 1) Male ☐ 2) Female

2. Age

☐ 1) 15-24 years ☐ 2) 25-34 years

☐ 3) 35-44 years ☐ 4) 45 years and above

3. Marital Status

☐ 1) Single ☐ 2) Married ☐ 3) Divorced/Separated

4. Level of Education

☐ 1) Lower than high school ☐ 3) Bachelor's Degree

☐ 2) High school or vocational school ☐ 4) Higher than Bachelor's Degree

5. Occupation

☐ 1) Government official/State enterprise employees

☐ 2) Private sector employees

☐ 3) Investment fund employees

☐ 4) Employees

☐ 5) Others……

6. Work Title

☐ 1) Top level management

☐ 2) Middle management

☐ 3) Lower level management

☐ 4) Operational level

☐ 5) Others.....

7. Field of Work/Organization

☐1) Trade

☐2) Finance

☐3) Airport Operations

☐4) Engineering

☐5) Aviation

☐6) Business development

☐7) Onsite operations

☐8) Human resources

☐9) Organizational communications

☐10) Others……

8. English Skills

Listening skills

☐ 1) Poor

☐ 2) Fair

☐ 3) Moderate

☐ 4) Good

☐ 5) Very good

Speaking skills

☐ 1) Poor

☐ 2) Fair

☐ 3) Moderate

☐ 4) Good

☐ 5) Very good

Reading skills

☐ 1) Poor

☐ 2) Fair

☐ 3) Moderate

☐ 4) Good

☐ 5) Very good

Writing skills

☐ 1) Poor

☐ 2) Fair

☐ 3) Moderate

☐ 4) Good

☐ 5) Very good

9. Monthly Income

☐ 1) Less than 15,000 Baht

☐ 2) 15,000 – 25,000 Bath

☐ 3) 25,001 – 35,000 Bath

☐ 4) 35,001 – 45,000 Bath

☐ 5) 45,001 – 55,000 Bath

☐ 6) More than 55,000 Baht

10. Experience in Aviation Industry

☐ 1) Less than 1 year

☐ 2) More than 1 year up to 2 years

☐ 3) More than 2 years up to 5 years

☐ 4) More than 5 years

<u>Section 2</u> Digital Usage Behavior

11. Time Spent using Digital Media per day

☐ 1) Less than 1 hour

☐ 2) 1-3 hours

☐ 3) 4-6 hours

☐ 4) 7-8 hours

☐ 5) More than 8 hours

12. Objective in Using Digital Media

Objective in Using Digital Media	Use the most (5)	Use a lot (4)	Use moderately (3)	Not use much (2)	Use the least (1)
1) For Entertainment/ Enjoyment					
2) To follow daily news					
3) To find additional knowledge					
4) Use in work					
5) To solve various problems					
6) Others.....					

13. Digital Gadgets used in Work (Multiple choices)

☐ 1) Mobile phone/Smartphone

☐ 2) Tablet

☐ 3) Notebook/Laptop

☐ 4) Computer

☐ 5) Others…….....

14. 14. Digital Media Activities during Work in order from 5 = highest to 1 = smallest

Digital Media Activities during Work	Use the most (5)	Use a lot (4)	Use moderately (3)	Not use much (2)	Use the least (1)
1) Online social media e.g. Facebook Instragram Twitter Snapchat					
2) Talk, send messages, telephone online e.g. Line Messenger Skype WeChat Facetime					

Digital Media Activities during Work	Use the most (5)	Use a lot (4)	Use moderately (3)	Not use much (2)	Use the least (1)
3) Watch TV, movie, listening to online music e.g. Netflix YouTube Joox Spotify					
4) Playing online games e.g. ROV PUBG					
5) Read books, articles, and study online e.g. Ookbee MOOC					
6) Online information search e.g. Google					
7) Buy/sell products and services online e.g. Lazada Shopee Booking.com Agoda Grab					
8) Online financial transactions e.g. Kbank SCB MyMo					

15. Application used during Work in order from 5 = highest to 1 = smallest

Application	Use the most (5)	Use a lot (4)	Use moderately (3)	Not use much (2)	Use the least (1)
1) Line					
2) Flight Aware					
3) Airports					
4) NOAA weather					
5) AeroWeather					
6) Flightrader24					

Application	Use the most (5)	Use a lot (4)	Use moderately (3)	Not use much (2)	Use the least (1)
7) Google Sites					
8) Windy					
9) Others.....					

Section 3 Digital Literacy

Please tick √ in the blanks in order of your opinion/knowledge/understanding on the issues, in order from 5 = highest to 1 = smallest

Digital Literacy	Use the most (5)	Use a lot (4)	Use moderately (3)	Not use much (2)	Use the least (1)
Access					
16. Know means and tools to search and access desired information sources					
17. Know the differences and rank of importance of various sources of information based on type, date, topic, writer, sender-receiver, important, and name					
18. Use media and contact service provider to express personal opinions, thoughts, and have social participation					
19. Can tell who created the information and content in media					
20. Can access the work process of the organization online					

Digital Literacy	Use the most (5)	Use a lot (4)	Use moderately (3)	Not use much (2)	Use the least (1)
21. Can receive, send information through work systems online					
22. Can use information received from the online work system of the organization for work					
Knowledge					
23. Basic knowledge in using computers					
24. Know Internet safety measures					
25. Know how about presentation of information					
26. Have knowledge about budget analysis					
27. Have knowledge about big data management					
Understanding					
28. Can work as a team online					
29. Can keep information online secure					
30. Can perform based on the policy and measures of the organization					
31. Capture the gist of the information received and can order the events					

Digital Literacy	Use the most (5)	Use a lot (4)	Use moderately (3)	Not use much (2)	Use the least (1)
32. Can organize information for presentation					
33. Can create and use digital images well					
34. Can do complex reports					
35. Can manage big data					
Usage					
36. Can use email					
37. Can organize email					
38. Can organize documents					
39. Can interpret meanings, understand, and can communicate the message to others					
40. Can use information to create their own pilot work					
41. Have experience in producing or creating digital information or content					

<u>Section 4</u> Factors that Impact Digital Literacy

Please tick √ in the blanks in order of your opinion/knowledge/understanding on the issues, in order from 5 = highest to 1 = smallest

Factors that Impact Digital Literacy	Use the most (5)	Use a lot (4)	Use moderately (3)	Not use much (2)	Use the least (1)
Operations Staff Expectations and Innovation Usage					
42. Believe in benefit from using digital technologies					
43. Believe that having good digital literacy would help in more effective work performance					
44. Believe in more opportunity in having good digital literacy					
45. Believe would get higher salary with better digital literacy					
46. Believe in promotion with better digital literacy					
47. Believe can do work effectively with better digital literacy					
48. Believe in better quality of life with better digital literacy					
49. Believe that digital literacy can fulfill work expectations					
50. Believe in better relationships with others in the organization would support better skills					

Factors that Impact Digital Literacy	Use the most (5)	Use a lot (4)	Use moderately (3)	Not use much (2)	Use the least (1)
Social Impact					
51. Believe that the organization policy would help to support good skills development					
52. Believe that digital technology can help the organization develop					
53. Believe that good organization culture would help support better skills					
54. Believe that digital technology plays a role in social development					
55. Believe that digital literacy can meet work expectations					
56. Believe that digital technology helps improve social standards					
57. Believe that using digital technology supports better social image					
58. Believe that using digital technology supports better social status					
Facilitating Factors					
59. Believe that if the organization has regular digital technology training skills would					

Factors that Impact Digital Literacy	Use the most (5)	Use a lot (4)	Use moderately (3)	Not use much (2)	Use the least (1)
be better					
60. Believe that organizations with operations manual in using digital technology would have better skills					
61. Believe that organizations have digital technology rights and benefits have better skills					
62. Believe that organizations that have clear rules in using digital technology have better skills					
63. Believe that organizations that prepare the materials and equipment for using digital technology have better skills					
64. Believe that organizations that have mentor system in using digital technology have better skills					

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