Digital Intelligence of Educational Personnel in Public Universities in 4 Southern Border Provinces during the COVID-19 Pandemic in Thailand

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Abstract

The purpose of this research was to study the current state of digital intelligence of educational personnel in public universities in the 4 southern border provinces during the COVID-19 pandemic in Thailand, study self-development to acquire digital intelligence, and study the readiness to bring public university into the digital university. The key informants were 27 lecturers working in public universities in the 4 southern border provinces of Thailand. This research used convenience sampling and content analysis. The qualitative research instruments were semi-structured interviews and observational forms. Used content analysis and thematic analysis. The results showed that the current state of the workforce has digital intelligence in the areas of privacy management, digital citizen identity and cybersecurity management, respectively. The self-development for digital intelligence, namely, self-learning, on-campus digital equipment work practice, and attend university training program, respectively. For the readiness to lead the organization to become a digital university, it was found that the university was not ready to become a digital university. However, it can be prepared to become a digital university by defining visions, goals setting, or plans to become a digital university, personnel needs high speed internet, more modern digital equipment and digital environment, respectively.

Keywords: Digital Intelligence, Public University, Educational Personnel, 4 Southern Border Provinces of Thailand, COVID-19 Pandemic

Introduction

As Thailand enters the 21st century, Thai higher education institutions (Universities) are committed to applying quality management efforts driven by more digital technology and innovation. In addition, by the time that Thailand has officially entered the ASEAN Economic Community (AEC) since 2015 (Siraprapasiri & Na Thalang, 2016), causes the university to focus on the importance of the quality development and factors affecting the readiness management to support the ASEAN Economic Community and entering the 21st century, in which Aunsiri & Charoensuk (2019) commented that most Thai educational institutions focus on the management and development of educational quality by emphasizing on learning

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development and governance of educational standards. In this case, Chaichan et al. (2019) found that the educational management of Thai educational institutions have created learning activities to enhance the atmosphere in the educational institutions and develop the learning ability with useful creative thinking processes by applying the knowledge to develop learners, personnel in educational institutions, and develop the educational institutions for further success.

At present, there are a large number of both government and private universities in Thailand by providing the education from bachelor to doctorate degree resulting in the competition amongst universities in nowadays, therefore, strategic management are applied to attract students' interest in various courses according to the student admissions plan (Chuaytukpuan, 2015), another part of the administration of higher education institutions focuses on human resource management, human resource development, and organizational development for high performance. The administration, therefore, focuses on bringing digital technology equipment to facilitate in every mission, thus, the operations inside university, more digital technology is required and all personnel must possess a high performance to automatically apply in their implementation in all roles and functions.

Especially in the four southern border provinces of Thailand, where there are public universities that have continuously responded to the government's Thailand 4.0 policy. One of the goals that many universities have set is to become a digital university as much as possible, thus trying to drive more with digital technology and innovation. The success of a university and

becoming a digital university, part of them depends on how much digital citizenship skills that university personnel possess. Digital intelligence are what citizens of the 21st century should know and comprehend in order to apply in their work and living their life, therefore, university operations require constant use of digital media, online media, and digital devices so understanding the norm of conduct is a must in order to be appropriate and accurate that is digital citizenship. In this case, Murray & Perez (2014) presents the information on the situation of digital literacy abroad, especially in the higher education institutions that mostly have become digital universities, and the digital roadmap has been assigned in the organizational development plan that is determined from a strategic plan of that country, which are mostly developed countries. Therefore, there must be an educational drive for digital literacy, hence, it must be defined as a national digital literacy strategy and be having an international digital literacy assessment to measure success.

As for digital literacy and digital intelligence, it may be new issue and may not be mentioned seriously in many universities, resulting in no comprehension and no international digital literacy assessment to measure success. According to the informal conversations of researchers with academic personnel in many universities, the majority of them still do not understand and realize the details of digital citizenship skills, hence, the majority of them just comply with the strict rules of the university. However, if the university has continued to implement digital technology equipment but personnel have not yet practiced using digital citizenship skills strictly, only the understanding of

the internet usage alone, it may result in the difficulty of becoming a digital university.

The digital intelligence of a person during the COVID-19 pandemic in Thailand will enable them to manage, control and direct themselves to create the sense of conscience and be aware of the utilization of information and digital technology, to use it with the understanding of rights, responsibility, ethics, legality, usage with intelligence and reasonable action. In this case, Eric & Jared (2014) presented the opinion that the digital literacy and digital leadership is a good thing for personnel in the organization as it creates a knowledge and understanding that is up to date with the changes and be able to prepare themselves to keep up with the changes and citizenship of the digital world. However, the digital intelligence, Chris (2013) is of the opinion that educational institution administrators have emphasized on this issue by teaching, having a mentor, and training to understand the rights, duties, responsibilities, data analysis, and having an ethical approach to implement digital technology in operations. For this reason, it is inevitable to educate and measure the digital literacy.

However, digital intelligence, especially digital literacy and digital literacy assessment during the COVID-19 pandemic in Thailand, are relatively few in Thailand's universities, and there is no serious study on this issue although this is essential to the development towards becoming a digital university. It is noticeable that all universities are increasingly focusing on the importance of digitality by introducing digital technologies in teaching and learning and administration, including technology equipment, information technology, computers, multimedia, or online electronic media, etc. However, for the achievement of learner quality, personnel quality, and entering international standardization. Therefore, having important information related to the digital intelligence of personnel will provide university the important information that can be applied to drive and develop the university to achieve its goals but without an obvious information or having no up-to-date information then it may be difficult for the universities to drive and develop to become high-performing organizations, and it may also be difficult to become a digital university in the future.

For many universities in the southern part of Thailand that still do not have an obvious information on digital intelligence during the COVID-19 pandemic in Thailand, the majority of them have not yet presented the important information for the society to have a positive perception about the issue in the current situation. In particular, how are the digital intelligence of the personnel in the current condition or ways to develop digital citizenship skills or the guidelines for managing change and organizational development to enable personnel to become digital citizenship and the readiness to drive and lead the organization to become a digital university that can support Thailand 4.0 policy, etc.

These relevant information above are all important information that affect the utilization in the administration of public universities in southern border provinces in Thailand to achieve its goal as a digital university. The more important information the university has, the more they can create the benefit and strength. Therefore, the researcher is interested in conducting basic research on "Digital

Intelligence of Personnel of Public Universities in 4 Southern Border Provinces during the COVID-19 Pandemic in Thailand", which the research results are preliminary data or basic information on policy utilization by applying research data to help decision-making in administration and policy-making in university administration. It can also be used to develop human resources that require future training programs, planning and defining digital citizenship development policies for personnel. It can also be further developed for continue advanced research.

Research Objectives

    1 . Study the current condition of digital intelligence of personnel of public universities in the 4 southern border provinces of Thailand.

    2 . To study the methods for self-development of personnel of public universities to acquire digital intelligence.

    3. To study the readiness to bring the public university in the 4 southern border provinces of Thailand into the digital university.

Concepts, Theories and Related Research

    Supawadee Suwannathen at el. (2019) conducted research on state and problem of digital technology usage of elderly in meuang district, Khon Khan Province. The research finding found that: 1) the technology literacy: elderly has ability to use digital technology, especially smartphone. Application capability at the middle level. Elderly access to digital technology with smartphone at highest level, followed by assess with social media and computer, access to digital technology with tablet at the lowest level. The comparison between capability and problem about usage of digital technology found that: female has capability in usage of application more than male but female has problem about access and usage of digital technology than male at the 0.05 level of significance. In additionally a significant differences in level of education, occupation before retire, mean salary per month and family situation that has significant differences capability and problem of usage digital technology at the 0.05 level of significance.

    Kritsupath Saranork & Panita Wanapirun (2018) conducted research on connectivism learning activity in ubiquitous learning environment by using ioE for digital native. The research found that: learning methods designing in order to create learning environment can be as follows; 1) smart classroom system, applies technology to create smart classroom which consists of three parts of convenient system for pedagogy 2) smart teaching system, which consists of seven procedures; recommendation, survey, presentation, separation, connecting teaching, advance organizer, and compilation, 3) smart learning system, which refers to intelligent learning, is done by teacher coaching and designing active learning. Active learning is designed by providing smart devices to connect to the internet and learning through cloud computing system, which is able to system learn through the smart devices of learners all the times.

Research Methodology

    1. Content, as for digital intelligence, the researcher bases the information on the concept of Council of Europe (2017), Park, Y. (2017), UNESCO (2017) & Worapot Wongkitrungrueng (2018), which

presents a framework for digital citizenship, include digital citizen identity, Privacy management, critical thinking, screen time management, cyberbullying management, digital footprints, cybersecurity management and digital empathy

2. Key informants. The key informants are personnel who work as academic professors in government universities located in four southern provinces. The key informants were selected by convenience sampling from professors who had leisure time and were convenient to provide information by conducting interviews without affecting working hours from Thaksin University with the number of 9 people, and conducting phone interviews with professors of PNU University with the number of 3 people, from YRU with the number of 9 people, from SRU with the number of 3 people, and from RUTS with the number of 3 people. Therefore, the total number are 27 people.

3. Research area, the researcher conducted the research in five government universities located in the lower southern part of Thailand, namely, Princess of Naradhiwas University (PNU), Yala Rajaphat University (YRU), Songkhal Rajaphat University (SRU), Rajamangala University of Technology Srivijaya (RUTS), and Thaksin University (TSU). However, the researcher did not collect data from Prince of Songkla University (PSU), Pattani Campus and Hat Yai Campus with the reason that they are a large research university which is already a digital university and is not grouped into a group of local universities for local community development.

4. Research instruments is a semi-structured interview form and structured observation which are designed and created by the researcher as an example of questions for discussion with key informants for primary data collection.

5. Data collection, the researcher collects secondary data from documents, textbooks, books, research papers and related research articles. Primary data were collected from interviews and discussions with key informants.

6. Data analysis was conducted by using content analysis by bringing the information obtained from the interview results in spoken language and observation to adjust it into a written language that can be understood. The details of the information are in the same meaning without any modifications.

Research Results

1) The current condition of digital intelligence of academic personnel in public universities in the 4 southern border provinces in Thailand. The results from data collection are summarized as follows;

1.1) Academic personnel, the results of the data analysis found that the majority of the academic personnel were of the opinion that the digital intelligence of academic personnel, the first top six are privacy management, critical thinking, cybersecurity management, digital footprints, digital empathy and digital citizen identity, respectively. In order to maintain personal data, most of them show that most of professors' work is related to the five main tasks and other tasks, so they need to search, use a large amount of information, and store it on the computer, so discretion is required in managing personal data so that it cannot be damaged or be used by others. It is necessary to know which information should be published and

which information is copyrighted. As for the analytical thinking should also have had a good judgment because in using the data, it must be analyzed and distinguished of which information would have good content and good to be utilized or which information would have dangerous content and should not be utilized or must be used with caution. Including the use of information online that must be very careful.

1.2) In applying their own security skills in online world, the majority of lecturers agree that they need to focus on data in their work, so it is important to protect their data by creating a code or security system first. They must be finding a way that other people cannot steal the information, and preventing the virus, etc. As for the ethical use

skills, it is considered that the professors must comply with the principles of ethics, rules and regulations of the university in the use of all types of digital equipment. In order to build a good relationship, others must be able to use the available information or retrieve it for work that requires careful consideration without infringing on other people's information with the knowledge of which information should be published and which information is copyrighted. As for the identity preservation skills, the majority of professors agree that it is necessary to create good information that characterizes one's own good qualities and publicize real information without spreading fake information online and carefully manage the good information for applying in publishing only.
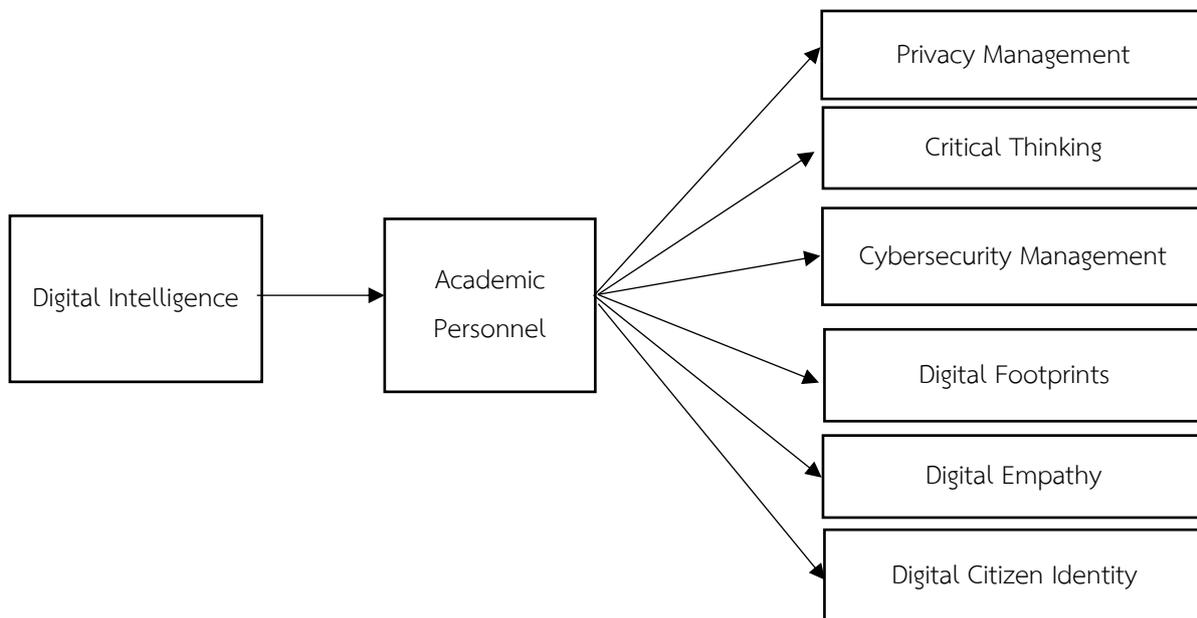

Figure 1.1: Current Status of Digital intelligence of academic personnel in public universities in the 4 southern border provinces in Thailand

From figure 1.1, The data analysis found that the key informants did not pay attention or focus on the issue of screen time management

and cyberbullying management, probably because most informants were lecturers with cognitive ability, analyze data ability and the ability to

distinguish the information by themselves, making them become cautious in the using and disseminating data, including the usage of digital equipment in academic work, therefore, it does not cause them any problems with online threats or having to use the equipment all the time, so there is no need to focus on the time spending on screen or self-control on screen time with the work-life balance that may be possible to create problems in their life.

2. To study the methods for self-development of personnel of public universities to acquire digital intelligence.

Data analysis found that most key informants have developed to acquire digital intelligence, the information as shown in figure 1.2
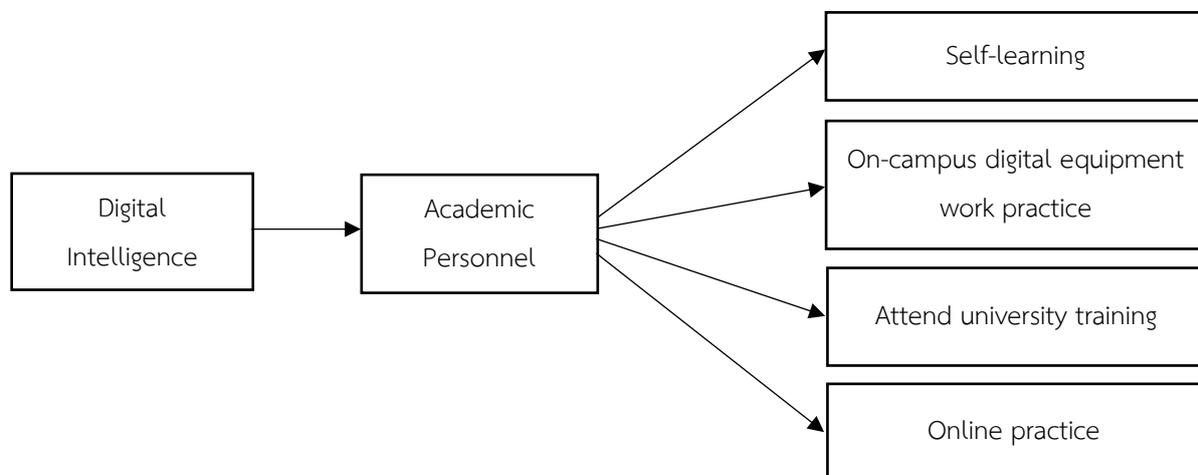
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┌──────────────┐      ┌──────────────┐         ┌──────────────────────────┐
│   Digital    │ ───> │  Academic    │ ──────> │       Self-learning      │
│ Intelligence │      │  Personnel   │         └──────────────────────────┘
└──────────────┘      └──────────────┘ ──────> ┌──────────────────────────┐
                              │                 │ On-campus digital equipment│
                              │                 │       work practice       │
                              ├──────────────>  └──────────────────────────┘
                              │                 ┌──────────────────────────┐
                              │                 │  Attend university training│
                              └──────────────>  └──────────────────────────┘
                                                ┌──────────────────────────┐
                                                │      Online practice      │
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Figure 1.2 Methods for self-development of lecturer in public universities to acquire digital intelligence.

From table 1.2, Data analysis found that most key informants have developed to acquire digital intelligence, namely, self-learning, on-campus digital equipment work practice, attend university training program, learning from colleagues, and online practice, respectively.

3. The readiness of the public universities to become a digital university and guidelines for leading the organization to become a digital university. The results of the data analysis found that the majority of the key informants were of the opinion that the university was not ready to become a digital university. However, it can be prepared to become a digital university by defining visions, goals setting, or plans to become a digital university, administrators must possess digital leadership to define activities/projects that lead to becoming a digital university, be providing a budget to support the digital university, should have brought more digital equipment or modern information technology to apply in every mission, and creating a university atmosphere by developing to be having high-speed internet as the first concern that should be implemented in all faculties and offices in order to be able to do activities or projects that lead to the digital era, etc.

Discussion

1. Research results of the current condition of digital intelligence of academics in public universities are critical thinking, cybersecurity management, digital empathy and digital citizen identity, respectively. The findings are consistent with Pakvipa Posri (2018) that conducted the research on the role of education for digital citizenship development. The research results show that the development of digital citizenship consists of three dimensions. The first dimension is of the respect for the rights of others, consisting of ethics and code of conduct, equal access and rights to internet usage, legal and the violation of the right to use the Internet. The second dimension is of the knowledge, consisting of knowledge and communication skills, media literacy to be able to handle it, learning, communicating, and the utilization of technology, and commercial knowledge for online trading according to the rules. The third dimension is of the privacy protection and security, consisting of accuracy and usage responsibility, the security in using to protect privacy, physical and mental health care to prevent the impact of the digital world, and is in line with the idea of Porz Kraiwin & Bancha Chalapirom (2020) that conducted the research on strategies for developing private school administrators based on the concept of digital citizenship. The research found that the current concept of digital intelligence in schools are the access to digital media, the compliance with the laws relating to digital communications, digital literacy, digital communication, and the protection of privacy rights of oneself and others.

2. Based on research results on how to do self-development to acquire digital intelligence through self-learning, on-campus digital equipment work practice, participation in university project practice, learning from colleagues, and online practice, respectively. The research results are consistent with Porz Kraiwin & Bancha Chalapirom (2020) that conduct the research on strategies for developing. The research result found that the development of private school administrators for digital citizenship includes coaching job training and on-duty training, external training that is to attend seminars and meetings, simulation and on-duty practice. In addition, this is consistent with the research of Manarat Kaeokerd, Sukanya Chaemchoy & Pruet Siribanpitak (2021) that conduct the research on the priority needs of academic management of secondary schools based on the concept of digital citizenship. The research results show that the overall the high level is required in academic administration based on the concept of digital citizenship. The school need to develop the curriculum, provide training and learning for personnel, create digital engagement, and organize learning activities for digital security.

3. The results on the study of readiness and guidelines for leading the public universites to become a digital university need to define visions, set digital goals, allocate a budget to purchase up-to-date learning resources, administrators must possess digital leadership to support digital university activities/projects to bring more modern learning resources in working for every mission and provide an environment to make the use of digital learning resources more convenient. The findings

are consistent with Songsiri Wichiranon & Arunee Arunreugn (2019) that conducted the research topic "Need Assessment to be a Digital University of Rajamangala University of Technology Phra Nakhon". The research result found that instructor group, aspects of classrooms, laboratories, and learning resource service systems and the university staff group, the aspect of learning resource service system was the highest, and also consistent with the research of Kampon Kessalee & Kanyarat Kwiecien (2018) that conducted the research on Digital Literacy in the Workplace for Supporting Staff, Loei Rajabhat University. The research results showed that literacy to become a digital university as a whole should have infrastructure factors, university literacy in the workplace, infrastructure, university policy, human resources, and development process. In addition, It is also in line with the concept of Suchanya Khaosakun, Teera Runcharoen & Worasit Ratanavaraha (2017) that presented the concept of Administrators in Digital Era which found that educational institute administrators need to transform themselves to become digital leaders that be able to manage the change in every new situations by bringing more information technology into their organizations, seek and allocate modern learning resources to apply in the management of educational institutions, and utilize the modern learning resources to the fullest potential by ensuring quality in every mission.

Recommendations

1. The research utilization

1.1 According to research results, it was found that the current condition of higher education institutions in the lower southern region

of which personnel possess digital intelligence in personal data protection and analytical thinking with a good judgment which is similar. The researcher would recommend the top administrators of higher education institutions to utilize the research findings for information management purposes to define a roadmap or action plan for becoming a digital university.

1.2 According to research results on how to develop personnel in public universities to acquire digital intelligence. The researcher would recommend the administrator who is in charge of human resource management or human resource development in higher education institutions to utilize the information to create human resource development programs in the organization and determine the allocation of budget for personnel development in order to comply with New Normal way of living which can develop a more advanced digital citizenship.

1.3 From the research results that the university is not ready to be a digital university and the guideline to develop the organization to become a digital university. The researcher would recommend the administrators of all levels to utilize the research results in defining visions, goals, or action plans for projects and activities management, and to increase the use of digital learning resources in all missions, etc. which will contribute to a more digital university atmosphere within the educational institution.

2. The next research conducting

2.1 According to the research results on the current condition of public universities that personnel possess digital citizenship skills in personal data protection and analytical thinking with a good

judgement which is similar. The researcher would recommend to conduct the research on the entering of a new way of life in the use of digital equipment in operations to bring higher education institutions into the digital era to support the Thailand 4.0 policy, or conducting research on digital learning and digital knowledge measurement of personnel in higher education institutions, etc.

   2.2 According to the research results on how to do self-development to acquire digital intelligence. The researcher would recommend to conduct the research on external factors influencing digital behavior changes of university personnel or conducting research on the guideline to utilize digital technology in order to have operational results that support the becoming of a digital university, etc.

   2.3 According to the research results on the guidelines for bringing higher education institutions into the digital universities. The researcher would recommend to conduct the research on the guideline to modify working style by applying digital equipment in work or conducting the research on the guideline to create an atmosphere to support a digital university or guidelines for doing activities that lead to becoming a digital university, etc.

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