

**CONCEPTUALIZING DIGITAL CITIZENSHIP  
FOR DIGITAL NATIVES IN THAILAND**

**Chawaporn Dhamanitayakul**

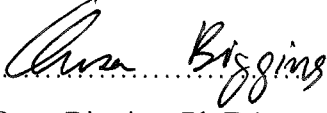
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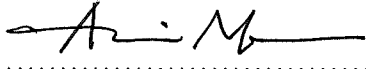
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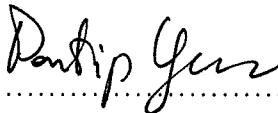
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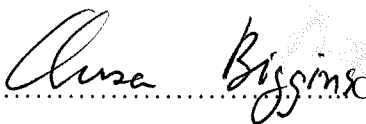
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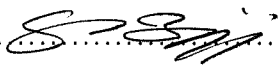
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## **ABSTRACT**

<b>Title of Dissertation</b>	Conceptualizing Digital Citizenship for Digital Natives in Thailand
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Digital media transition needs stronger digital citizenship awareness, skills, and competencies, especially among Thai Digital Natives. This study was aimed to conceptualize digital citizenship as a framework and guidelines. The objectives of the research were to survey digital behaviors of Thai digital natives, to measure the level of digital citizenship of digital natives in Thailand, to examine the relationship between digital natives' digital behaviors and their level of digital citizenship, to study the related contexts to digital citizenship in Thailand, and to develop digital citizenship concept and key attributes for digital natives in Thailand.

This research conducted a multi-step study designed to conceptualize definitions and attributes concerning digital citizenship that fit in Thai society. Information relating to digital citizenship was obtained by data collection via online and offline resources. Besides, survey research was conducted to examine the process of developing digital citizenship concept and attributes, and to measure the level of digital citizenship. The survey research was conducted with 400 Thai digital natives by online questionnaires, together with focus group interviews with the target samples, selected by purposive sampling method and classified into 3 groups: 1) high-school students (born in 1996-1998), 2) university students (born in 1992-1995), and 3) the first jobbers (born in 1989-1991). Moreover, ten experts and policy-makers relating to digital citizenship area were interviewed to assure the digital citizenship concept for Thai digital natives appropriate in Thai social and cultural contexts.

The results show that in Thailand, the development, accessibility, and use of technologies, especially digital devices and internet have changed the lives of most Thai people, especially the lives of Thai digital natives (born in 1989-1998), who live much of their lives online and are the main drivers of national digital economy and social transformation. A SmartPhone is found to be the most used device of Thai digital natives with the purposes to update information relating to their daily life, especially for entertaining themselves. Besides, it is found that the level of digital citizenship of Thai digital natives is at the high level with their accessibility and creation but at the low level in terms of active participation and engagement, especially as participating and justice-oriented citizens. Additionally, the correlation between their digital media behaviors and the level of digital citizenship is at a moderate level ( $r=0.61$ ) at a statistically significant level of 0.01.

In conceptualizing and creating attributes of digital citizenship for Thai digital natives, digital context is needed to be considered. From the study of the elements of digital citizenship ecosystem, it is found to consist of the following: 1) Digital natives as human capital of the national development, 2) democratic citizenship promotion in Thailand, 3) Thailand digital economy and social policy, 4) digital natives' patterns of digital media behaviors, 5) digital literacy in education (formal and non-formal), and 6) technology advancement, all of which influence the development of digital citizenship concept. In addition, digital citizenship concept applicable in Thai society is a concept of an individual's connection to internet facilitated by digital technology to interact with others in a digital society by relating to his/her daily activity into the physical world with an awareness of three main domains of citizenship: responsible citizens, participating citizens, and justice-oriented citizens with a humanity concern, a respect for others' rights and differences, ethical conscience, digital competencies, entrepreneurship skills, a realization and communication of her positive self-identity as Thais. Besides, it includes maximization of appropriate digital possibilities for their lifelong learning to be an active citizen who can retain their digital resilience as well as to live happily with a social contribution-minded as a creative change agent in the fast-changing digital society.

In addition, the following attributes of digital citizenship for Thai digital natives are found and classified by the level of their digital citizenship and their online

usage behaviors: 1) digital literacy, 2) digital communication, 3) digital commerce 4) digital etiquette, 5) digital access, 6) digital ethics and laws, 7) digital rights & responsibilities, 8) digital security, and 9) digital health & wellness, respectively.

Regarding the development of digital citizenship in Thailand, it is crucial for every sector to prioritize the cultivation of digital citizenship as an urgent matter due to rapid changes in technology. Furthermore, it is found that advanced and fast digital infrastructure development alone cannot lead the country to a completely digital economy and society without developing human capital. The priority of the growth depends on the collaboration from various sectors: the government as a policy maker, academic institutions as knowledge providers, media as a channel of information, and families as personal groomers of socialization.

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Last but not least, a special thanks to my family. Words cannot express how grateful I am to my parents and my two beloved sisters for their unconditional love, as well as their moral and emotional support. I am also grateful to my other family members and friends who have supported me along the way.

Finally, this Ph.D. thesis is dedicated to my beloved aunt, Yussaporn, who, for her entire life, had been looking forward to congratulating me on this achievement. She may be now watching and smiling from somewhere up there.

Chawaporn Dhamanitayakul

May 2019

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## ABBREVIATIONS

### Abbreviations

ACMA

CRC

IDI

ISTE

ITU

MIL

NCA

NCTE

NIDA Poll

NSW

NTCE

UN

### Equivalence

Australia Media and Communication

United Nation Convention on the Right of  
Child

ICT Development Index

International Society for Technology in  
Education

International Telecommunication Union

Media and Information Literacy

National Communication Association

National Council of Teachers of English

National Institute of Development  
Administration

New South Wales

National Council for the Accreditation of  
Teacher Education

United Nations

# CHAPTER 1

## INTRODUCTION

### 1.1 Background

The transformation in information and communication technologies has created a much more substantial amount of the endless stream of information, ideas, and knowledge, than ever. The disruptive technologies, including digital possibilities connected by the Internet, have brought about successful challenges in the established incumbent economy (Christensen, Raynor, & McDonald, 2016) and, at the same time, opened new possibilities in activating and accelerating political, social, and educational development. Such development, accessibility and use of technologies, especially digital devices and internet, have transformed the lives of most people all over the world. People have access to information to meet their basic needs, to connect with other people, and to improve the quality of their lives. Their online communication activities, such as uses of digital devices and social networking, have been seen as everyday activities around the world. However, it is proved to become a habit of younger people nowadays. Nonetheless, information and means of online communication are now the fundamentals that dedicate to practices in democracy, collecting communities, and empowering civil society.

Digital possibilities bring in the relationship across segments in which individuals in both urban and peripheral society can participate in an interesting issue in a multicultural society. The discrimination of different classes, ethnicities, identities, and qualifications are fading in the virtual world as ones can access to any information. The approach of equity, human right, and fairness, of which the source of knowledge is accessible everywhere rather than in educational institutes, are now becoming the public's mainstream of standpoints (Sukanya Sudbanthad, 2017). Nevertheless, to efficiently participate in a digital society, it is essential that individuals must engage in the public affair in the community level, the national level,

and even the global level. They need access to related and reliable information that assists them in making decisions. Participation in a digital society unavoidably involves empowering these people with the capability of social involvement as both producers and consumers in discussion relating to situations and public issues. As a result, media and digital literacy education are now mainly associated with the practice as a citizen of a nation (Hobbs, 2010). Additionally, these are the major concerns of the related sectors in Thailand as well because Thailand is now moving forward into the path of Digital Society and Economy implementation, media, information; therefore, digital literacy is needed for lifelong learning, community development, economic productivity, healthcare, and all aspects of the citizens' lives. Since one of the main focus contributing to Thailand Digital Society and Economy is human capital, to equip Thai people with digital literacy, especially Digital Natives who live much of their lives online without distinguishing between the online and the offline, is essential (Palfrey & Gasser, 2008).

### **1.1.1 Digital Native**

Digital Native populations based on the Institute of Technology and International Telecommunication Union (ITU) (2013) and the demographic statistics of the United Nations (UN) are the youth. According to ITU, Digital Natives are young people, born 1989-1998, who have actively been online for at least five years. From the survey of ITU, it showed that in the year 2013, 30 percent of the world's youth are Digital Natives. While it reveals that fewer than a third of the world's young people are digital natives, this group of people plays a vital role. Firstly, where the online population is monitored, the youth are distinctively overrepresented, and secondly, these people are the core forces of ICT usage and impact. However, as the whole world, young people are not all digital natives. The level to which young people are online connected differs significantly across the globe; moreover, digital nativism is diverse and varies according to region, situation, environment, and level of economic development.

According to ITU Measuring the Information Society (2013), a country has a high portion of digital natives when there are relatively high levels of the youth and

moderate to high levels of Internet use. Numerous countries have a large percentage of young people relative to these levels of Internet use.

Digital natives are encouraging ICT situation in lots of developing countries since young people are mostly online in comparison with the whole population. Classified as the early adopters, these people already have strong skills and experiences, as well as possess many of the distinct traits of the digital natives. According to ITU (2013), if young people are indeed the tip of the developing world's digital spear, then it should focus on them, learn from them, and grow with them.

From the study “Measuring the Information Society” (ITU, 2013), young people with low income and are from lower and middle-income countries, including many African and Southern Asian countries that are relatively high networking since they are the leading countries in Internet use. This factor points to the significance, not in numbers, of digital natives especially in low-income and lower-middle-income countries, including African and Southern Asian countries.

While these digital possibilities have created significant benefits and opportunities to digital natives, with whom they have also shaped social and ethical issues to deal. Across the world, the awareness of several concerns has been raised, starting from online safety to information misuse, to health and mental risk, and E-waste management (UNESCO, 2014).

The rapid growth of digital natives comes on its way with the alarms of their online activities. Remarkably, the risks concerning young adults are not those of adults' anxiety. Moreover, according to Livingstone and Helsper (2010), it appears that the more online opportunities young people gain, the more risks they may accidentally or deliberately face, i.e., almost every day when the media publicize the inappropriate social networking sites, Internet scams or cyberbullying. Along with pornography, illegal downloads, credit-card fraud, game, and Facebook addiction, viruses, spam, and hate speech, these are the dark side of the Internet. Each day, digital natives spend their time in the online world for many hours. Additionally, congruent with Livingstone and Haddon (2009a), risks may not occur when young people are sophisticated, confident, or experimental internet users.

Despite being regarded as digital natives, there is still a shortage of the resources to use the internet sufficiently to explore its opportunities or to develop

digital literacy skills among young people (Helsper & Eynon, 2010). Therefore, it is significant to urge digital natives' internet use with confidence and flexibility. Any sector creates online opportunities without careful consideration of safety. They may also create online risks. Nevertheless, when they try to reduce risks, they may consequently not reduce chances (Livingstone & Haddon, 2009).

### **1.1.2 Online Risks and Online Opportunities among Digital Natives**

The EU Kids Online comparative report (Hasebrink, Livingstone, Haddon, & Olafsson, 2009) reveals the possible contextual evidence for the explanations of cross-national differences in the youth's access to and use of online media including the risks they encounter from the online media usage. The report shows the different contexts that shape young people's online activities: cultural, family, peer, marketing, and educational, including the political and legal framework. Besides, the different levels through which the youth work and interact to one another influences their level of online opportunities and risks while these online opportunities and threats are also influenced by the youth's access, use, attitudes, and skills in a circular relationship. Thus, in understanding the nature of digital device usage, the concerned risks are required to be investigated, classified, and assessed based on the quality of different countries. (Livingstone & Haddon, 2009).

The digital possibilities bring different opportunities and resources for young people in developing their nations. At the same time, they also open to new groups with a lower level of digital literacy. There are some common weaknesses among developing nations in which online risk is regarded as a threat to those countries. The failings include limited financial resources, institutional capacity, and other means of verifying and tackling these threats. In those developing countries, with their leaders struggling to identify these challenges, digital literacy is treated as a suboptimal policy when compared to other priorities of the nations (Gasser, Maclay, Colin, & Palfrey, 2010)

According to Gasser et al. (2010), for a better understanding of online risks faced by digital natives in developing countries, the risky chances are classified as follow;



### 1) The Production of Child Abuse Image

Digital possibilities have radically assisted the methods by which young people's images, especially in sexual exploitation, are produced and circulated. The trend toward real-time creation of pornographic materials has been labeled as an emerging topic, particularly for developing nations; for example, an Internet connection quality at home in Indonesia is still low, Internet cafe plays a significant role in production and distribution of the pornography. (Barendregt, 2006) Reportedly, these cafes are the factors encouraging this inappropriate use of the digital devices by providing the facilities for the pornography-material production and distribution, such as private booths equipped with a personal computer and Web Cam that facilitate female teenagers to have online striptease shows for money.

### 2) Sexting

Sexting is coined from the combination between "sex" and "texting," which means a form of teenagers' and young adults' social practices by using mobile devices to send messages, photos, or video clips related with sexuality. However, there are pieces of evidence from Indonesia (Barendregt, 2006) proving how teenagers use cameras in a mobile phone to produce videos showing young boys and girls performing sexual activities and highlight the roles of a mobile phone as a harmful device in the distribution of and access to sexual behaviors. Moreover, reports from India also assure that sexting is an emergent phenomenon (Mathew, 2009). From interviewing with young mobile users, it was found that the undesirable photos showing friends' sexual behavior were distributed among friends, but there were differences in the ways this group of people uses the internet. Apart of that, the study of female teenagers' use of a mobile phone in Cape Town revealed that the experimental sexual behaviors were used through Mxit, a South African popular instant messaging application that operates on mobile phones.

### 3) Pornography Exposure

The exposure of young people to pornography has been raised as an issue among developing countries. In Thailand (Michelet, 2003), the access rate of pornographic site links exposed by young kids from an internet cafe, especially in city areas, increased. However, few cyber cafe owners were trying to stop young people from exposing to such pornographic pages.

#### 4) Grooming

Instant messaging, social media, email, and new social spaces application, such as Chat Room, Dating Portals, Online Multiplayer Games, etc. are found to groom a child towards sexual abuse. According to one study in Thailand (Michelet, 2003), there was a significant number of young people accessing to Chat Room and speaking with strangers. The result ended up with a face-to-face meeting with these strangers who lied about their real selves for sexual activities.

#### 5) Cyberbullying

In developed countries, the threats, both online and offline, children experienced most frequently are online harassment and cyberbullying. Many countries: South Africa, China, India, and Thailand, have reported cyberbullying among young people (Shariff, 2008). Cyberbullying often happens to teens who know each other and later leads to anxiety and psychological problems.

Dealing with this kind of online risk by analyzing the levels and patterns of digital usage is thus essential for comprehending online risks and online opportunities because they shape the context in which digital natives are exposed to those risks. Besides, policies need to be implemented to guarantee that appropriate protections are in place. Moreover, due to different levels and ways of access, safety policies need to be expanded, varied and updated to catch up with trends in this dynamic digital transition.

### **1.1.3 Media and Digital Literacy**

Since people consume, express and communicate a variety of content in daily life through different types of media, literacy skills (ability in reading, writing, and interpreting) are the fundamental elements of meaning sharing through symbol systems for full participation in society. Understanding the reality of the digital behavior phenomena, especially of young people, helps to provide them with necessary resources and to improve their media literacy skills. However, different levels of literacy face various difficulties in developing literacy skills. For instance, a young person who needs an effort for reading a book tends to find online navigation difficult. Accordingly, abilities for surviving in the online world is required to manage and prepare to cope with both immediate risks and long term effects. There have been

still many concerns about the skills and knowledge necessary for the public. According to Livingstone, Kirwil, Ponte, and Staksrud (2014), from academic perspectives, “media literacy” encompasses and frames the new skills and knowledge required for using SmartPhone and complicated world of the Internet, including other modern communication technology.

Media Literacy may be defined as the ability to access, analyze, and evaluate the power of content which we are now confronting daily and which relates to the contemporary culture. According to Livingstone and Haddon (2009), media literacy is promoted in every media arena, including television, film, radio, recorded music, print media, internet and other new digital communication technologies, with the goal of equipping individuals with their ability to control media influences in many domains: cognitive, affective, and behavioral.

The skills and competencies required for effective media use are increasingly theorized in terms of literacy (Tyner, 2000). Some theories regard media literacy as the attempt to identify the necessary skills and techniques required for individuals’ media use, while others focus on the endpoint on how the message is used and interpreted, how it affects their lives. However, according to Potter (2008), as none is innate media literate, the purpose of media literacy is to help people to protect themselves from the possible adverse effects. Several dimensions of development require effort from each as well as some guidance from experts. It is a long-term process and never ends. Thus, no one ever reaches a point of complete media literacy because the skills can always be continually developed to keep up with the rapid change of communication technologies.

UNESCO (2013) determines the goal of media literacy as the empowerment of people to exercise their rights of free expression, to protect their information access, to evaluate the message, to secure their participation as a citizen, and to support all voices to be heard. From UNESCO’s perspective, rather than media, it’s vital that one needs to understand and make the best use of information while media literacy focuses more on how an individual uses the media properly. As a result, UNESCO’s effort is to adjust the imbalance of media literacy by giving importance to information literacy in parallel to media literacy development. Media and Information Literacy Development is thus the primary purpose of UNESCO. According to

UNESCO's framework of media and information literacy, such literacy comprises three essential skills or abilities: access, evaluation, and creation.

The ability to "access" refers to information and media-content retrieving and storing with appropriate technologies and to identify useful information and media content from all sources and formats to satisfy the users' needs. In term of the ability to "evaluate, it means users can understand, critically analyze, and evaluate information and media content while concerning about the work and functions of media and information institutions within the context of universal human rights and fundamental freedoms. For the ability to "create," one needs to have the ability to create and produce information and media content effectively and to communicate with others ethically. Hence, being media and information literate should also emphasize the promotion together with the protection, and focus on civil enforcement to understand and analyze the media as well. Furthermore, the 'media' should embrace information and communication technology, including traditional media (Nudee Nupairoj, 2013; UNESCO, 2013; Ousa Biggins, 2011).

As today in digital disruption era, digital possibilities, with the assist of the internet, bring the opportunities of interactivity to the users of all ages with no space and time limit, citizens gain more chances to generate their content and participate in the social activities through their digital devices. On the other hand, these digital possibilities, which enhance interactivity among users, can also bring risks to them in many ways, i.e., lower critical thinking when engaging in a digital society, especially of digital natives whose daily lives always relate to online activities.

To cope with these risks, "digital and media literacy" is used to integrate various skills: cognition, emotion, and socialization, in the use of the content, devices, and technologies. Besides, power of analysis and critical thinking, norms of message development and creativity, the ability of social reflection with ethical thinking, active participation through team collaboration, and competencies of social action as a change agent of the society are also crucial. Additionally, another essential element of digital literacy is a respect for others' online reputation which requires appropriate use of copyright property and respect of others' rights.

A remarkable association between digital and media literacy fosters the promotion of citizenship competencies within a digital environment. Every citizen in

every country of the world is being encouraged to aware of their freedom of expression and the right to use information. At the same time, it helps to build and sustain democracy. This literacy is essential for citizens to be informed to realize their access to reliable information through digital technologies and to analyze the relating messages and the value of civic engagement.

In regards to citizenship promotion in the digital environment, digital literacy requires the youth to apply these skills in consuming, using and generating information as citizens of the country, based on the fact that young people experience the same opportunities and challenges as everyone else who uses digital technologies.

#### **1.1.4 Digital Literacy and Digital Citizenship**

While the promotion of media literacy is fostered worldwide, most of the young people are devoid of ethical thinking or consideration for others when using a web. As a result, adults are supposed to play a role in helping young people toward ethical decisions. However, in the internet space, young people get there first while adults are mostly absent from their children's online world where children and the youth need their ethical guides the most.

According to Wood (2009), there have been many proofs that witness growing anxiety on the political, moral, and social capability of young people as active citizenship. Along with citizenship education in schools, there has been evidence of increased political and public concern on how young people interact with their local communities. All of these are discussions on broader social policy about how individuals express social responsibility in democracies.

Digital Citizenship is a universal and constructive approach to encourage children to learn how to be safe, smart, and capable citizens of a digital society. This helps them to understand their rights and responsibilities, recognize the benefits and risks, and realize the personal and ethical implications of their actions. Collier (2009) suggests three key issues to help children to be good digital citizens: Safety and Security, digital literacy, and ethics and community, including knowledge, awareness, and skills.

**Safety and Security:** this is an understanding of the risks from others' and our conduct, including the awareness of the danger caused by malicious applications, i.e., virus, phishing, etc.

**Digital Literacy:** This is a learning of how to sort, manage, evaluate, and create information in the digital society. Digital literacy is the skills that are different from traditional crafts in reading and writing.

**Ethics & Community:** This is an awareness and practices of appropriate and ethical behaviors in different digital environments. It also covers a concern on our digital reputation and our responsibilities in participation in digital activities, i.e., social networks, games, public forums, etc. as a citizen of the community.

In recent years, many scholars in child development have expanded traditional education and media literacy strategies by covering the notion of digital citizenship as the core of their lessons and recommendations. Besides, the 21<sup>st</sup>-century skills of digital citizenship are vital for helping young people to learn, communicate, and collaborate with safety and responsibilities. According to Ribble (2011), "Digital Citizenship" is defined as the norms of behavior relating to technology use. It is about how to understand the complexity of digital citizenship and the issues of technology use, abuse, and misuse. However, digital citizenship is closely aligned to civics in a traditional sense. Through an understanding of civic virtue, people will be able to flourish their communities and play an active role in their society.

Apart from that, the concept of digital citizenship is still ambiguous. It is relatively an indefinite term that covers a diversity of issues, directly or indirectly related to the physical and psychological well-being as well as the responsibility of the youth who use digital media. Furthermore, it does not include only exclusive access to technology, such as an internet connection, mobile phone or some other devices, but also the broader characteristics of digital media. While there are different definitions of digital citizenship depending on the context of culture, one thing that is shared in common is that in every case, education, income, race, and ethnicity define the chances for individuals in the groups to develop digital citizenship. (Mossberger, Tolbert, & McNeal, 2008)

According to the UNESCO ICT Education Forums of UNESCO (2014), increasing digital citizenship and cyber wellness was found. Participants from various

states, institutions, organizations, and schools expressed their needs for practical guidance to educate their children on this topic continually. Despite a distinctive level of awareness and the collection of existing resources and campaigns, a lack of understanding of this area remains. The demand for relevant advocacy programs, policy responses, capability building, and corresponding resources has increased in response to the growing concerns about the safe and responsible use of ICT for education, including about minimizing risks and maximizing opportunities.

As media messages control the political debates and tools such as Facebook and Twitter are used for activism and for organizing political movements around the world, it is gradually significant for young people to be able to look at media critically and engage as digital citizens who contribute to their communities in a positive way. Hence, they need the competencies relating to media and digital literacy to be able to understand and maximize their rights as consumers, members of online communities, citizens of a state, and as human beings (Media Smart, 2014).

#### **1.1.5 Digital Citizenship and Digital Natives in Thailand**

The concern on the digital situation in Thailand is like other countries facing increasing digital opportunities in parallel to the risks. Thailand was ranked the eighty-fifth on the ICT Development Index (IDI) and was one of the tops among developing countries with 6.3 percent of digital natives of the total population, and 42.3 percent of whole youth (ITU, 2013). Apart from that, the use of digital devices and internet by young people in Thailand has increased rapidly in the past decades. According to the data from the Information and Communication Technology Survey in Household (2014) by the National Statistic Office, it was found that concern on young people who are digital native was focused. Among the increasing online use rate of all ages, the group of Thai Digital Natives born 1989-1998 possessed the highest internet usage rate (69.7%). That was because of the opportunities supported by the government to meet the goals of The Eleventh National Economics and Social Development Plan (2012-2016). One of main visions of the program was to promote a society of quality that could provide social protection and security, enable the users to enjoy an access to a fair judicial system and its resources, and to participate in the development process under good governance and development towards integrity,

knowledge and skills appropriate to each range of age. Besides, the plan was aimed to strengthen social institutions and local communities to ensure positive adaptation to changes. Due to these strategies, one of the particular ongoing activities is the fostering of Digital Society.

The purpose of digital society promotion is to provide new opportunities for education, employment, and social interaction. Numerous projects in digital areas have been set up. In 2020, Thailand will have smart development, with knowledge- and wisdom-based economy and society. Every person will have an equal opportunity in taking part in the development process, which will lead to balanced and sustainable growth. The “Smart Thailand 2020” vision states that “ICT is a key driving force in leading Thai people towards knowledge and brought by ICT Master plan and wisdom and leading society towards equality and sustainable economy.”

The government is attempting to transform Thailand into a digital economy of which the draft action plan consists of six pillars:

- 1) Hard infrastructure or a fiber-optic network that needs to be established throughout the country
- 2) Soft infrastructure or the laws and regulations that support a digital economy, as well as cybersecurity
- 3) Service infrastructure
- 4) Digital-economy
- 5) Digital society
- 6) Digital knowledge

Some scholars said, “cyber opportunities bring cyber risks.” Likewise, digital media influences and affects digital natives’ lives worldwide, including Thailand. Although digital possibilities bring many new opportunities into the lives of digital natives in Thailand, a large number of Thai digital natives still update the pictures showing their drunkenness on Facebook, write race-discrimination comments on blogs, and take scandalous videos on YouTube. They do all of these without realizing who will see their content and how they will react to it. They forget that the internet is much more public and more permanent than other media.



Research on “Cyber-Bullying Management by Family Participation” conducted by the National Institute for Child and Family Development, Mahidol University (2012) found that society still lacked an understanding and knowledge of cyberbullying problems. Parents did not have time to monitor their children's online activities and were not aware of cyber-bullying. Almost 30% of parents had no idea how long their children spent their time on a computer each day.

Apart from cyberbullying, children do not realize the effect of the posting of their nude photographs on the internet. From the survey of Michelet (2003) with the samples aged 7-11 years old in Thailand, he found that 35% of them exposed themselves to pornographic websites, 22% communicated with virtual friends, 33% used IM and Email or chat rooms to speak with strangers. Besides, 24% of all respondents had a face-to-face interaction with someone they first met on the internet. 58% of these cases were all extraordinary meetings, half of which turned out to be an unpleasant experience, mostly because of their virtual friends' lies or deception. Moreover, 25% of these children used online chats for shocking experiences, caused mainly by the use of their vulgar language or the intended transmission of violent or sex-related materials. Regarding older children, 25% of chat users reported that their correspondent invited them to engage in sexual activities.

Furthermore, additional risks are found in Thailand, which includes obligatory internet censorship, internet filtering, and some technology permissions. The laws and policies of Thailand relating to cloud computing and the digital economy are also irregular as the regulations are tight in some areas but loose in others. Accordingly, digital possibilities related to laws in Thailand require substantial updates and expansion, as they still do not cover information management of rights or technical protection measures. (BSA The Software Alliance, 2013)

Digital natives need guidance to live in the dangerous digital world. Therefore, the programs of Media and Information Literacy (MIL) and Digital Citizenship for Thai digital natives are essential tools to equip them. Digital natives must be empowered with such devices and skills that will enable them to become resilient technology users. To enhance media literacy, five skills of digital natives should be improved as follow; 1) comprehension, 2) critical thinking, 3) creativity, 4) cross-cultural awareness, and 5) citizenship.

As a member of UNESCO, “The Body of Knowledge of Media Literacy in Thailand” has been developed to be appropriate in Thailand context. Thai schools and policymakers have applied for such courses. They are designed for teachers involved in growing children. Nevertheless, these courses have to be created to suit the media culture of Thailand because of the different effects and influences of media throughout the country. As a result, the Five Dimensions of Media Literacy Body of knowledge in Thai context are created, which include 1) Media Exposure, 2) Media Analysis, 3) Media Understanding, 4) Media Evaluation, and 5) Media Benefit (Pornthip Yenjabog, 2011).

The rapid rate of change in the development of new communication technologies and the flow of information is likely to continue. Consequently, people need to engage actively in lifelong learning starting as early as preschool and running well into old age to use tools and resources that can help them accomplish personal, social, cultural and civic activities. At the same time, people are increasingly aware of the negative aspects of life in a media and information society. Inappropriate media culture includes violent and sexually explicit movies, pornography, blogs, public relations masquerading as news, widespread sales promotion of unhealthy products, hate sites that promote prejudice, sexism, racism, and terrorism, cyberbullying, and unethical online marketing practices. Intellectual property and reputation are also critically essential matters in a time when people experience fast-changing concepts of ownership, authorship, privacy, and social interaction.

Such ubiquitous and easy access to varying choices of information and entertainment calls for people’s new knowledge and skills towards smart and responsible decisions. Therefore, the abovementioned skills towards digital citizenship are not just what digital natives should have or should be, but they are requisite skills to ensure the achievement of personal, professional, and social benefits in this digital era. (Hobbs, 2010). While Media and Digital Literacy has been activating under the surveillance of parents, teachers, and policy makers in Thailand, the support for Digital Citizenship is still slow. Therefore, it is not enough to have only a set of rules for children to follow at home or school because they can access through their SmartPhones. Consequently, children need to comprehend the reasons behind the rules and be able to make critical judgments for dealing with these

inappropriate and irresponsible online conducts. To make Thai digital natives realize their rights and responsibilities, recognize benefits and risks, and understand the personal and ethical consequences of their actions are vital issues to survive in this digital world.

Since new digital technologies and digital society policies are rapidly emerging in Thailand, any rules or principles can quickly become incomplete and outdated. Instead of attempting to set standards related to technologies only, it is better to identify these underlying issues to guide users concerning this dynamic digital landscape. Hence, it is crucial for digital citizens to equip themselves at an early age with knowledge, skills, and attitude towards safe and responsible use of digital possibilities. In dealing with these challenges, a core competency of digital citizenship should pinpoint how to use these technologies in an ethical, safe and responsible way without constraining them from fully participating in and contributing to a digital society. It is crucial for building a deeper understanding of the youth's safety in a digital context in Thailand. Furthermore, Thai digital natives need to have a grounded knowledge of technologies and its appropriate use so that they will become a productive and responsible Digital Citizen.

## **1.2 Problem Statements**

- 1) What are the digital behaviors of digital natives in Thailand?
- 2) What is the level of digital citizenship among digital natives in Thailand?
- 3) What is the relationship between Thai digital natives' behaviors and the level of digital citizenship?
- 4) What are digital citizenship contexts in Thailand?
- 5) What are the appropriate digital citizenship concepts and attributes for digital society in Thailand?

### **1.3 Objectives**

- 1) To examine the digital behaviors of digital natives in Thailand
- 2) To measure the level of digital citizenship among digital natives in Thailand
- 3) To investigate the relationship between Thai digital natives' digital behavior and the level of digital citizenship.
- 4) To study digital citizenship contexts in Thailand
- 5) To develop digital citizenship concepts and attributes for digital natives in Thailand

### **1.4 Expected Benefits**

This study will contribute the concepts and guidelines for cultivating media and digital literacy and digital citizenship for Thai digital natives as digital citizens since Thai digital natives are prospective drivers towards the development of Thailand's ICT. Moreover, the findings from this study can be useful for education sectors to apply them for digital citizenship curriculum design and can enhance the roles of education development in the digital era where the rapid flow of information and leaping technological growth is inevitably encountered. Besides, it may help to broaden awareness and understanding of digital behaviors of Thai digital natives and their use of digital media as a citizen under certain contextual and challenging factors so that parents, teachers, and policymakers can guide digital natives to stay safe in this digital world. Also, the results of the study hopefully can suggest the monitoring and control mechanisms and practices of new media. Moreover, the study may lead to effective digital policies in Thailand, or in other countries with similar contexts to Thailand, including helping to highlight the needs towards the government's appropriate strategic plans to deal with dynamic technological changes so that Thai citizens can live in a peaceful society with equity, fairness, and resilience.

## **1.5 Assumption**

Understanding digital behaviors through online media, such as patterns of digital technology usage of Thai digital natives (born in 1989-1998, with at least 5-year of online experience), helps to identify the level of citizenship of digital natives in Thailand. Thus, due to the rising of both digital native population and technology change rate, it is assumed that Thai digital natives have a high level of online access and creation but low level of responsibility, respect, and self-protection, especially the level of active participation and justice-orientation as digital citizens.

It is essential to know the level of digital citizenship and to extract Thai Digital Citizenship Concepts that are appropriate for a digital society in Thailand as it is the basic structure for fostering their digital rights and responsible behaviors, as well as their resilience in a digital culture.

## **1.6 Limitations**

This study explores digital behaviors of digital natives in Thailand and measures the level of digital citizenship of Thai digital natives by the survey research with Thai youths, born in 1989-1998 with at least 5-year online experience. To elaborate on the findings on digital behaviors from survey research, focus group interviews with Thai digital natives are conducted. Besides, documentary analysis on digital practices and situational factors were conducted from both online and offline resources (2004-2018) to extract Digital Citizenship Concept and Guidelines, confirmed by the experts from an in-depth interview. The obtained concepts and attributes of digital citizenship are offered as suggestions towards the desirable and needed digital citizenship that should be fostered among Thai Digital Natives.

## **1.7 Operational Definitions**

Digital Citizenship Concept: A concept of practices of a Thai citizen, by connecting it to internet facilitated by digital technology, relating digital society with his/her daily life activity in the physical world with citizenship consciousness

(responsible citizen, participating citizen and justice-oriented citizen), respecting others' right and diversity, being responsible for his/her action with ethical awareness, being equipped with digital literacy competencies and entrepreneurship skills, comprehending and communicating his/her positive self-identity of Thainess, maximizing appropriate digital possibilities for their lifelong learning in order to be an active citizen who is able to retain his/her resilience and to live happily with a concern on social contribution as a positive change agent amidst dynamic changes of a digital society.

**Digital Citizenship Attributes:** A set of features regarded as characteristics of a digital citizen, classified in order by the relationship between the level of digital citizenship and the level of digital behaviors in relations to digital media use as a citizen as follow: 1) digital literacy, 2) digital communication, 3) digital commerce 4) digital etiquette, 5) digital access, 6) digital laws and ethics, 7) digital rights & responsibilities, 8) digital security, and 9) digital health & wellness.

**Expected Digital Citizen:** A Thai individual, connecting to internet facilitated by digital technology, interacting to digital society by relating his/her digitally driven daily life activity into this physical world, equipped with digital literacy competencies as well as comprehending both political and capital literacy for social contribution as a responsible citizen, a participating citizen and a justice-oriented citizen who maximizes appropriate digital possibilities for their lifelong learning in order to be an active citizen who is able to retain their digital resilience and act as a positive social change agent of the society.

**Thai Digital Native:** Young Thai people, born in 1989-1998, who have been active online users for at least five years and are expected to play an important role in the country's digital economy and social development. They are vital drivers of ICT uptake, use, and impact; hence, it is necessary to groom digital citizenship consciousness to these people for interaction in their daily lives in a digital society.

**Digital Behavior:** Patterns of digital media usage through an online connection of Thai digital natives to serve their purposes. Digital behaviors cover the following for this study: 1) online time per day, 2) mode of online connection, 3) place access internet, 4) digital device use, 5) self-perception on online expertise, and 6) online

participation as a citizen in three dimensions: a responsible citizen, a participatory citizen, and justice-oriented citizen.

**Level of Digital Citizenship:** Level of digital natives' interaction and conduct in digital society by relating their daily life activities to the physical world with digital citizenship consciousness, measured by the Ribble's elements of digital citizenship (2004) as follow: 1) Digital Access, 2) Digital Commerce, 3) Digital Communication, 4) Digital Literacy, 5) Digital Etiquette, 6) Digital Laws & Ethics, 7) Digital Rights & Responsibilities, 8) Digital Health & Wellness, and 9) Digital Security (or self-protection).

**Digital Possibilities:** Anything is digitally driven that induces Thai digital natives towards more productive and efficient lives, especially towards their social contribution and participation in an interesting issue in a multicultural context to be an active citizen that retains their digital resilience and acts as a positive social change agent of the society.

**Digital Citizenship Context:** A series of circumstances, interrelated as an ecosystem, that forms the setting for conceptualizing digital citizenship for digital natives in Thailand as well as for influencing or fostering digital citizenship for digital natives in Thailand, which include: 1) Digital natives as human capital for the country development, 2) democratic citizenship promotion in Thailand, 3) Thailand's digital economy and society policies, 4) technological growth and advancement, 5) digital literacy in education (formal/informal), and 6) digital natives' patterns of digital media usage behavior.

## **1.8 Conceptual Framework**

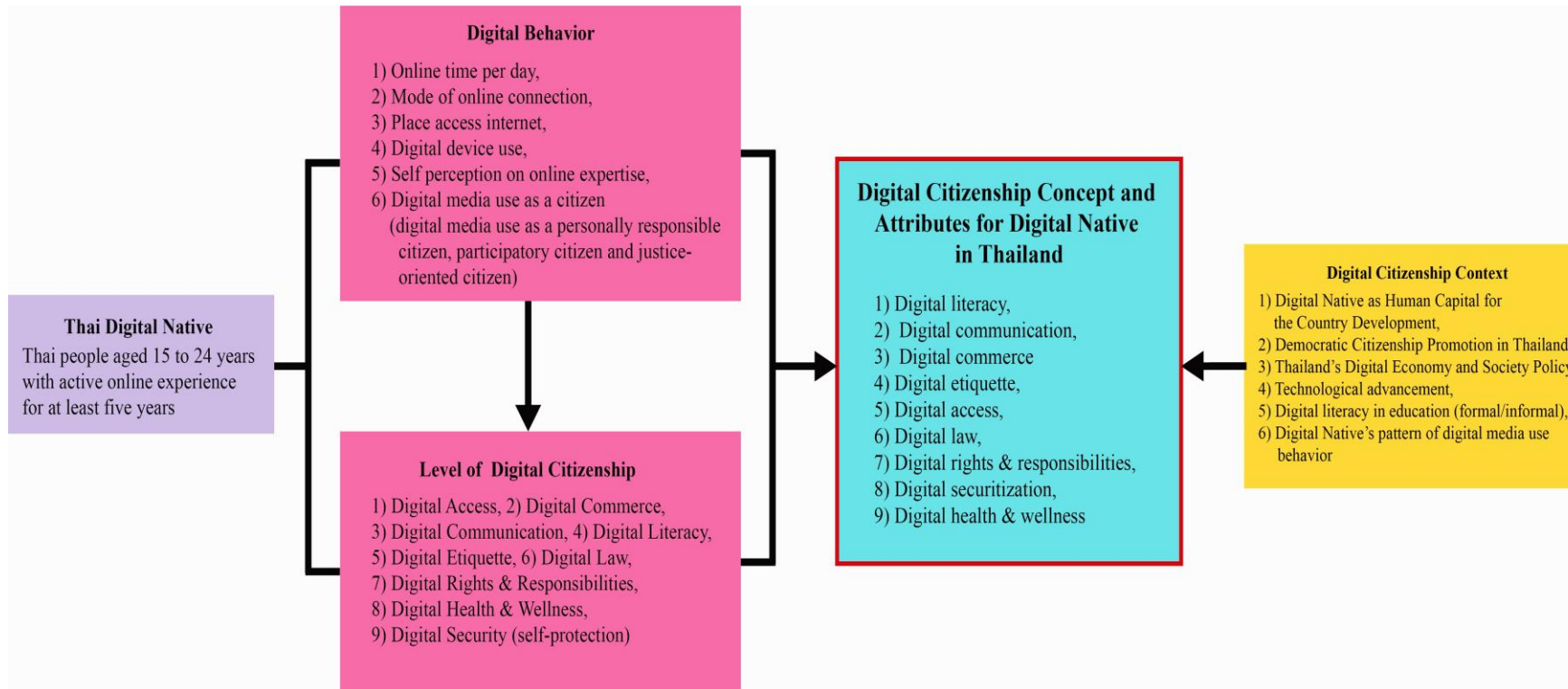
The finding of this research is expected “to conceptualize Digital Citizenship Concept and its attributes for Thai digital natives.” Namely, it aims to develop Digital natives as human capital for the country development, to promote democratic citizenship in Thailand, to improve Thailand's digital economy and society policies, to support technological advancement, to increase digital literacy through education (formal/informal), and to find proper patterns of digital media usage behaviors that fit in digital citizenship context in Thailand. Accordingly, to understand Thai digital

natives' digital behaviors and to measure their level of digital citizenship are the primal objectives of this study. The target samples of these objectives are Thai digital natives, or youths born in 1989-1998, with at least five-year experience in internet use, who are significant driving ICT usage in many developing nations, including Thailand. Besides, among the whole population, they are incomparably online users. Relatively, as the early adopters, they are equipped with concentrated skills and experiences, which are the most distinctive traits of the digital native (ITU, 2013).

From the framework of the study, documentary analysis on digital citizenship and its context, obtained from both online and offline resources (2004-2018) is the principal methodology for achieving the research objectives. For the measurement of Thai digital natives' level of digital citizenship, the survey questionnaires, comprising personal and demographic information, patterns of digital behaviors in relations to online access, usage, and expertise as digital citizens, and the level of digital natives' digital citizenship, are collected from Thai digital natives. Moreover, to confirm the findings from survey questionnaires, focus group interviews with digital natives are also conducted.

The process of developing the Digital Citizenship Concept and its attributes is drawn after the data on digital behaviors is collected, and the level of digital citizenship is measured. Subsequently, in-depth interviews with experts in the field of digital citizenship are also conducted to strengthen the conceptualization of the framework. After that, the needed Digital Citizenship attributes are placed in order respectively. Such ordered Digital Citizenship attributes gained from the study are expected to be the basic structure for formal and informal Digital Citizenship promotion programs in Thailand. The conceptual framework of this study is illustrated in Figure 1.1





**Figure 1.1** Conceptual Framework

## **CHAPTER 2**

### **LITERATURE REVIEW**

This chapter presents literature review related to the topics of the study. By exploring the four dominant themes of the research questions, this chapter will help to understand how theoretical foundation on digital context contributes to the development of digital citizenship concept and its components for digital natives in Thailand. The theories used for this study include Concept of Digital Native, Concept of Digital Behavior, Concept of Digital Literacy, Concept of Citizenship, and Concept of Digital Citizenship. The scope of this literature review includes research paper and articles related with the research questions, published during 2008-2018.

#### **2.1 Concept of Digital Native**

Apparently, there are more than a few names that try to be used for the general concept of youth and digital networking technologies. Three terms: “Net generation”, “digital natives” and “millennials” are used mostly. Net generation” was the first word used to pinpoint young digital users (Tapscott, 2000). By considering this population by age, net generation includes only those people born between January 1977 and December 1997. According to “digital transformation,” net generation is characterized as being “at the core of the new digital media culture” (Tapscott, 2000). Moreover, Oblinger and Oblinger (2005) add that people in the net generation were born around the time personal computers (PC) were introduced. These people are able to automatically use a variety of IT devices and browse an internet; however, their understanding of this communication technology and source quality may be at low level.

According to Prensky (2009), digital natives are the generation of young people who are all “native speakers” of the digital language of computers and internet. In other words, they are the first generation who have grown up with digital

technology, have lived their entire lives under digital technology, and have played tools and toys of the digital age. Instant message (IM), SmartPhones, and other digital possibilities are not only a part but are essential parts of their lives. From the study in the United States context, Prensky (2001), suggested that unlike older generations, young people are more constantly surrounded by and always plugged into portable personal digital devices such as SmartPhones and tablets.

Apart from that, the emergence and rapid diffusion of digital technology to the area shows a drastic disruption in the last decades of the 20th century. However, while Prensky suggested a radical break with previous generations, he did not define digital natives with the specific dates of birth, as Tapscott did for the term net generation.

Prensky (2001) clearly differentiates his digital native generation from its antecedents by defining them to the latter as “digital immigrants”. Digital immigrants are people who may have developed some skills of digital literacy, but nevertheless traditionally stick to their lifestyle without digital possibilities. According to Prensky, all people born before 1980 are digital immigrants. For information seeking, these people do not turn to the internet first, but prefer reading manuals, e-mails, and ready-to-edit documents, including a link. Besides, they speak in an outdated language.

The term “Millennials” was wide spread when Howe and Strauss published *Millennials Rising: The Next Great Generation* in 2000, which made this term become common among scholars. According to Howe and Strauss (2000), the first group of millennials in the United States graduated from high school in 2000. These people are described as relatively upbeat and engaged youths, who expected high standards of living. Jones, Ramanau, Cross, and Healing (2009) also described millennials as heavy technology users. From his survey in 2007, American students born between 1983 and 1992 owned a SmartPhone 97 percent while 56 percent owned an MP3 player.

However, there are numerous terms associated with digital natives: generation next, Google generation (Helsper & Eynon, 2010), born digital (Palfrey and Gasser, 2008), generation Y (Perillo, 2007), generation C (Duncan-Howell & Lee, 2007), homo-zappiens (Veen & Vrakking, 2006), technological generation (Monereo, 2004) and net savvy youth (Levin & Arafeh, 2002). Others mentioned about young people

as new millennium learners (Pedró, 2007) and living digital childhoods within media families (Rideout & Hammel, 2006).

Up to now, there have been some debates on whether “digital native” is the best terms to describe a specific range of age or a generation. Nonetheless, the definition of digital natives does not represent young people at individual level but at group level, similar to the term “teenager” that includes the youth from 13 to 19 years old. Therefore, once these teenagers turn to be 20, they will be excluded from this term.

On the other hand, the term “generation” is relatively a more fixed set of people based on their whole lifespans. Besides, the different name of each generation is derived from the historical background in which the people are born (Edmunds & Turner, 2002). For them, the term “generation” is defined as a set of age group who has some social significance in forming itself as a cultural identity. Similarly, Pierre Bourdieu (1993, as cited in Buckingham, 2006) perceives that generations are socially and culturally defined and produced. Each generation possesses its own tastes, orientations, beliefs and characters, influenced by its historical and economic situations, including generational fights over cultural and economic resources. Thus, in general, a generation may be defined as a group of people born within a fixed period of time and whose cultural identity is formed and classified by their beliefs, personalities, and historical consequences. To illustrate this, “baby boomer” is called for the generation of people born in the U.S.A “after the Second World War” and the term is based on people’s birth year up to the end of their lives. However, Wark (1993) redefined the term “generation” based on media culture instead of the war or depression period. Over a decade after that, Buckingham (2006) agreed that the term “generation” ought to be tied with media culture and he emphasized media as a signifier of generational affiliation. Furthermore, he also proposed that there should be a digital generation of young people who have common beliefs and dispositions and form another cultural identity in the society. Especially, Buckingham pinpointed the term on how and for what purpose they use digital technology and media.

Besides, the argument of defining the term “digital native” based on a range of ages or generations, there have also been arguments of whether the term should be determined by the exact date or not. While Prensky did not determine the period by an

exact date, some scholars determined to cover “those who were born after 1980” in a broad range but some determined it more specifically as “those who were born in or after 1982.” (Oblinger, 2003).

Since digital technologies have grown without cease, the term “digital native” that used to cover only one generation has been expanded to cover the following generation continually. Thus, the first generation starts in the late 1990s and early 2000s, and the next as the second generation of digital natives. Later, Helsper and Eynon (2010) identified the rise of Web 2.0 as a shift mark of digital natives by separating those born after 1990 from the young adults born between 1983 and 1990, and label the former as second-generation digital natives. Earlier, Oblinger and Oblinger (2005) argued that this second generation shares the digital natives’ childhood characteristics influenced by digital possibilities. This this generation uses as tools and toys. They further believe that the second generation is characterized by the “omnipresence and interactivity of the internet, the availability of a range of portable communications devices, and the virtually immediate speed of communications.” Still, among these controversies, there is one common thing. Specifically, it is the assumption that specific birth dates cannot be applied universally across countries since digital disruption has arrived in different countries at different times, including amidst different historical and economic situations.

### **2.1.1 A Population Based on Digital Access and Learning or the Breadth and Depth of Online Use**

One of the alternative concepts is that digital natives are a population defined by their shared accumulation of experience, skills or expertise, rather than a specific age group or generation. A population is a subset of people who share some qualifications, such as having an access to internet at home and digitally literate (Palfrey & Gasser, 2008). Members of this population can either come from any age range or generation (e.g. any home internet user), or be further delimited by age ranges or generations (e.g. home internet users between the ages of 15 and 24).

Helsper and Eynon (2010) express this sentiment, theorizing that a digital native is determined not only by age (or generation), but also by experience and breadth of use. From one of his studies in South Africa with the first-year university

students, Thinyane argues that “rather than calling Digital Natives as a generation, which is an overstatement, since only 1 billion out of the 6 billion people in the world have access to digital technologies, we prefer coining them as a population” (Thinyane, 2010). It is remarkable that even Prensky (2009) begun to distance himself from the notion of the digital native as a generation. Besides, a study conducted in the United Kingdom found “no evidence for the claim towards generational divide.” Accordingly, it is doubtful to define a generational digital native (Jones, 2002) and digital natives are better understood as a diverse group, i.e. young and old, both of whom share technological experience, skills or expertise differently.

Palfrey and Gasser (2008) identify the digital native according to access to technology “because access is differentiated between states and regions and between social classes within an individual state”. For digital natives, access to technology seems to include electricity and broadband, as well as education systems that teach literacy, including digital literacy, and seems to emphasize critical thinking as well. Subsequently, they clarify that this population is further limited insofar as access to new technology alone is not sufficient: digital natives must have access and have a “learned digital literacy” (Palfrey & Gasser, 2008). For example, someone with internet access at home and with digital literacy gained from formal or informal learning would be considered a digital native, whereas someone with no access to internet, or with access to internet but with no formal or informal training, would not be counted. Similarly, people of age 10-year old or of 75-year old who have cultivated considerable and comparable expertise and skills in technologies would be both classified as digital natives, regardless of their generational differences. Thus, according to this understanding of digital native, a subset (but not all members) of the net generation are digital natives; and, conversely, members of other generations (i.e. not only youths) can be digital natives as well.

Apparently, this argument over the definition of digital natives goes beyond the scope of age, birth dates, accessibility, and level of expertise, and entails the notion of considering digital natives in terms of how and for what purpose they use the technologies. Focusing on a number of digital activities that indicate digital nativity, Helsper and Eynon (2010) find that breadth of use, experience, gender, and education are as important as, or even more important than, age in defining digital

natives. They believe that digital nativity is a combination of factors: age (those of the youngest generation who has grown up with technology), experience (those who have been using or submerged in the internet the longest), breadth and depth of use (those for whom the internet is integrated into daily life) (Helsper & Eynon, 2010). Some scholars argue that digital natives are drawn to the omnipresence and interactivity of the internet in places like the United States, as well as the availability of a range of portable communication devices, and the virtually immediate speed of communications (Oblinger & Oblinger, 2005; Robinson 2008). In addition, digital natives in developed nations purportedly exercise what Hargittai and Hannant describe as “autonomy of use,” namely the freedom to use technologies whenever and wherever they want, without some traditional constraints, such as queues in library patrons, an employer’s supervision etc. (Hargittai & Hinnant, 2008).

According to these scholars, young people in high-income communities use digital technology and internet on their mobile phones, tablets, and computers to engage with friends on social media platforms or instant messaging, to download and listen to music, to play games with friends or strangers around the world, to browse websites for fun, and to blog (and “micro-blog”). For these authors, the ubiquity of the technologies and the style of work and play that these communities exercise in their social practices circumscribe a part of the definition of digital natives. Some indeed posit that the distinguishing feature of digital natives is the sophisticated way by which they absorb technologies into their daily lives (Robinson, 2008). Robinson (2008) also reminds us that core technology-based skills may not be necessarily transformed to be sophisticated skills with other technologies or general information literacy.

### **2.1.2 Length of Use and Submerged Exposure**

Although the temptation is to focus on sophistication and ubiquity of use, there is growing evidence that many young people’s actual usage of digital technologies remains rather more limited in scope than the digital native rhetoric would suggest (Selwyn, 2009). For example, surveys of adolescents show a predominance of game playing, text messaging and retrieval of online content (Crook & Harrison, 2008; Luckin, Clark, Graber, Logan, Mee, & Oliver (2009); Lenhart et

al., 2008), whereas younger children's use is more rudimentary, centered on writing, image creation, and basic gaming (Selwyn, 2009).

Others suggest that young people's internet use is not as sophisticated as it seems. Specifically, Selwyn (2009) points that young people are passive internet users rather than content creation on the internet or Crook and Harrison (2008) coined the word "a low bandwidth exchange" of information and knowledge to describe their passive use. Although young people might consider themselves more skillful at using the internet than their parents (Livingstone & Bovill, 2001), from a comparative study on information-seeking abilities between teenagers and adults in the United States and Australia, it was found that teenagers were likely to have less patience and poorer research skills (Nielsen, 2005). Moreover, it was found that children between the ages of nine and nineteen lacked skills in evaluating material they found (Hargittai & Hinnant, 2008, p. 605).

### **2.1.3 The World's Digital Native**

From "Measuring Information Society Report (2012)", a model that operationalizes the definition of the world's digital natives was developed in order to apply it for datasets and to quantify the world's digital natives, country by country. Based on this model, from the total population of the world of around 7 billion, 363 of them were million digital natives or approximately 5.2% of the world's total population. Among these people, 30% of digital natives aged 15-24 years old engaged in online activities sustainably. Still, these digital natives, at global level, are just a minority of today's youths. Primarily, this might be due to relatively low internet usage rates in many developing countries with large (youth) populations while ICTs are a fairly new phenomenon in those countries. Tracing 5 years back from 2012 of this model, or in 2007, young people who used online (with 5-year experience) were considered as digital natives. During such period, internet penetration was relatively low and only 21 percent of the global population was online. However, since five years ago, internet usage has been increasing significantly in the developing countries or from 11.9 percent in 2007 to 30.7 per cent in 2012. This report tried to indicate that 53 per cent of today's young internet users in the developing countries were not qualified as digital natives yet. On the contrary, within the next five years, the digital



native population in the developing countries will be multiple, assuming no drop-outs from internet usage among the youth population.

According to this model, a country will have a high percentage of digital natives if in that country there are a large number of youth population who use internet at medium level at least or there are smaller numbers of the youth population, but with high-level of internet use. Many countries have a large proportion of young people relative to their population as a whole, or, in other words, a youth bulge. Furthermore, young people are more likely to be online than general population as a whole. The proportion of the youth population who are young internet users with five years of experience or more tend to have high degree of sustained internet use, which drives a high level of digital nativism, particularly in Europe, North America, and the developed countries in general.

The age gap can be calculated from the ratio between a country's internet users aged 15-24 years old and its overall internet users. Therefore, the age gap is most salient in the developing world where digital natives vigorously lead their nation's use of the internet. On the other hand, the countries with the biggest age gaps of internet users (mostly the developing countries) are likely to be more impacted by their digital natives. In addition, there is a strong correlation between a nation's ICT infrastructure and uptake (i.e. as measured by the IDI results) and the percentage of its population who are digital natives. Enhancing infrastructures and improving the affordability of ICT services should support a growing level of digital nativity. From some studies, secondary school and tertiary education enrollments were also found to correlate strongly with the percentage of digital natives within a country.

Finally, in developed economies, the majority of young people are online users, so are the majority of the population of a country as a whole. As a result, digital nativity may confer less on the youth's driving role or unique position, whether in relation to their peers or to the population as a whole. In contrast, for the developing economies, the findings may offer much more food for thought.

ICT usage of many developing nations are driven by digital natives since they are the early adopters of ICT and are equipped with concentrated skills and experiences, which are ones of the most distinct traits of digital natives. The sustained enhancement of ICT infrastructures, together with an increase in secondary and

tertiary school enrollments, especially among females, are ways to boost levels of digital nativism even further. As the youth are a major drive of the developing countries, it is thus important to emphasize this group of people to learn from them and move forward with them.

## **2.2 Concept of Digital Behavior**

During the past decade, a drastic diffusion of digital technologies enables the youth or digital natives to connect their daily life with internet easily. Besides, in 2000, 75% of teenagers were found to use internet but in 2009, 93% of them used internet. (Lenhart, Madden, Macgill, & Smith, 2008). Due to the enormous growth of online use of teenagers and their accessibility to reach tremendous offerings, to understand how such digital possibilities lead the youth to live through internet is thus essential.

Understanding digital natives' digital behaviors helps to identify both risks and opportunities of their online engagement. Owing to an easy access to social media, several advantages as well as opportunities on virtual sphere to explore their interests and problems similar to others, including academic supports are provided. This can help to strengthen their online communication, skills, and knowledge.

### **2.2.1 Opportunities and Risks in Online World**

The benefits of digital access to internet connection, according to Lusk (2010), are academic assistance and support since a high number of websites can provide information and knowledge for digital natives' homework and assignment. Besides, in virtual communities, both peers and adults can assist them to understand their lessons or academic concepts. Most of all, online world also responds to digital natives' belonging needs as social and membership needs are distinct for people of this range of age. Accordingly, the youth want to be included and supported in online communities, especially if such needs cannot be responded in the offline world. Websites or online world are directed to different groups' interest, which later can turn to be their routine activities. Hence, platforms to serve such online routine activities are provided for the youth to discuss their topics with friends, to access their

needed resources, and most of all to create a safe sphere for them to reveal their deeply personal issues. In online world, sensitive or concealing issues i.e. sexual activities drug use, mental health, etc. are also provided. These sensitive issues are hardly disclosed to adults, or even to their peers. However, in online world, the anonymity enhances their self-disclosure and revealing.

The EU Kids Online Comparative Report (Hasebrink et al., 2009) reveals the possible contextual evidence for the explanations of cross-national differences in access, use, and also risks. The report shows the different contexts: cultural, family, peer, market, educational and school, and political and legal context, that shape young people's online activities. The different levels through which they work and interact influence the level of online opportunities and risks, which, in turn, are also influenced by their access, use, attitude, and skills in a mutually reinforcing way. Thus, in understanding the nature of digital device usage, the concerned risks are required to be investigated, classified, and assessed based on the nature of different countries. (Livingstone & Haddon, 2009).

The digital possibilities bring different opportunities and resources into the lives of young people in developing nations. At the same time, they also open to the new groups with lower level of digital literacy. Normally, there are common weaknesses among developing nations in which online risks are regarded as a threat for those countries. The weaknesses include limited financial resources, limited institutional capacity, and limited means of verifying and tackling those threats. In such developing countries, digital literacy is treated as a suboptimal policy when compared to other priorities of the nations (Gasser et al., 2010).

According to Gasser et al. (2010), for a better understanding of online risks faced by digital natives in developing countries, the risks are classified as follow:

- 1) The Production of Child Abuse Image

Digital possibilities have radically assisted the methods by which young people's images, especially in sexual exploitation, are produced and circulated. The trend toward real-time creation of pornographic materials has been labeled as an emerging topic, particularly for developing nations; for example, as Internet connection quality at home in Indonesia is still low, Internet cafe plays a significant role in production and distribution of the pornography. (Barendregt, 2006)

Reportedly, these cafes are the factors encouraging this inappropriate use of the digital devices by providing the facilities for the pornography-material production and distribution, such as private booths equipped with a personal computer and Web Cam that facilitate female teenagers to have online striptease shows for money.

#### 2) Sexting

Sexting is coined from the combination between “sex” and “texting”, which means a form of teenagers’ and young adults’ social practices by using mobile devices to send messages, photos, or video clips related with sexuality. However, there are evidences from Indonesia (Barendregt, 2006) proving how teenagers use cameras in mobile phone to produce videos showing young boys and girls performing sexual activities and highlight the roles of mobile phone as a harmful device in the distribution of and access to sexual behaviors. Moreover, reports from India also assure that sexting is an emergent phenomenon (Mathew, 2009). From interviewing with young mobile users, it was found that the undesirable photos showing friends’ sexual behavior were distributed among friends but there were differences in the ways these photos were used by this group of people. Apart of that, the study of female teenagers’ use of mobile phone in Cape Town revealed that the sexual experimental behaviors were used through Mxit, a South African popular instant messaging application that operates on mobile phones.

#### 3) Pornography Exposure

The exposure of young people to pornography has been raised as an issue among developing countries. In Thailand (Michelet, 2003), the access rate of pornographic site links exposed by young kids from internet cafe, especially in city areas, increased. However, there were few cyber cafe owners trying to stop young people from exposing to such pornographic pages.

#### 4) Grooming

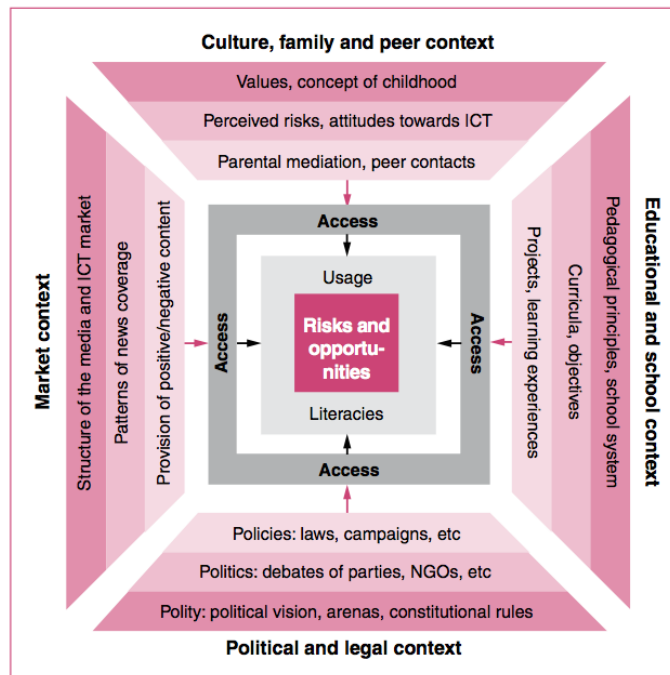
Instant messaging, social media, email, and new social spaces application, such as Chat Room, Dating Portals, Online Multiplayer Games, etc. are found to groom a child towards a sexual abuse. According to one study in Thailand (Michelet, 2003), there was a significant number of young people accessing to Chat Room and speaking with strangers. The result ended up with a face-to-face meeting with these strangers who lied about their real selves for sexual activities.

### 5) Cyberbullying

In developed countries, the threats, both online and offline, children experienced most frequently are online harassment and cyberbullying. Many countries: South Africa, China, India, and Thailand, have reported cyberbullying among young people (Shariff, 2008). This often happens to the teens who know each other and later leads to anxiety and psychological problems.

To visualize opportunities and risks dedicated by digital device usage, it is helpful to understand digital natives' online behaviors by analyzing possible contextual differences in their access and use in different contexts as aforementioned: cultural, family, peer, market, educational and school, and political and legal context as these contexts shape their online activities. (Livingstone & Haddon, 2009). Thus, to better understand Thai digital natives' digital behaviors, this research applies contextual factors or variables that function as indicators of contextual influences on online opportunities and risks.

According to Livingstone and Haddon (2009), it assumes that risks and opportunities are influenced by access, use, attitudes, and skills in a mutually reinforcing way as illustrated in Figure 2.1. However, to understand the nature of digital usage, related risks are needed to be identified, analyzed, and evaluated based on country-specific. It is further widely assumed that those with greater online expertise take up more opportunities while avoiding more risks, and vice versa. Moreover, all variables influence one another to an extent that some can influence one another only indirectly through other variables.



**Figure 2.1** Conceptualizing Children's Internet Use

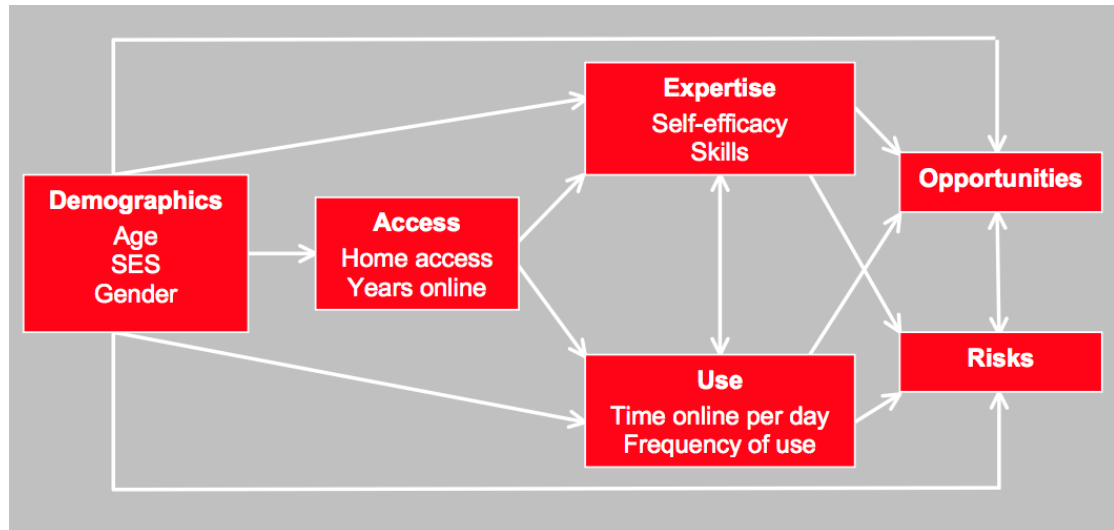
**Source:** Livingstone and Haddon, 2009.

### 2.2.2 Active Variables on Online Opportunities and Risks

Livingstone and Haddon (2009) found in "Internet Literacy among Children and Young People: Findings from the UK Children Go Online" that UK children had different opportunities, risks, and broad or narrow uses of internet. These different patterns of internet use are found to correlate with age, gender, and socio-economic status. In other words, how these children used internet could be explained by such demographic variables. From the study, access and uses were found to affect online experiences while place of access to internet and time spent on internet were recommended for future studies.

Seemingly, digital natives' digital behaviors were more complex, when measuring their online expertise (i.e. self-efficacy and skills). Besides, online opportunities and risks were found to be affected by how the youth perceived the level of their online expertise. From a path analysis, Livingstone, Bober, and Helsper (2005) further found the direct and indirect association of online expertise and use

with demographic variables at the statistical significance level (as shown in Figure 2.2). The findings yield a model of such causal relationship to be further tested.



**Figure 2.2** The Causal Relationship between Demographic Variables, Internet Access, Online Expertise and Use, and Opportunities and Risks

**Source:** Livingstone and Haddon, 2009.

From the study of Livingstone, Bober, and Helsper (2005), the active variables affecting online opportunities and risks are applied to explain and discuss on Thai digital natives' digital behaviors. Such active variables are as follow:

1) Demographic variables

Age

Age is found to relate with online opportunities and risks. The older children are, the more time they spend on using internet and the more skilled they are with more experiences from the increased opportunities and risks.

Socio-economic

Class or economic status of children's family is related with the children's access to internet. Middle-class children are more likely or have higher chance to have online access at home since their families can provide online devices for them than children of lower class or lower income. Economic status thus directly relates with online opportunities; however, it is not found to relate with online risks.

### Gender

Gender is directly related with the length of digital experience. Males are found to have longer years of experience and thus faced broader ranges of risks or breadth of risks.

#### 2) Internet access

Access at home and length of online experience are found to be related with online use and expertise. Therefore, the youth who can access internet at home and use internet for longer time tend to spend more time online and have a higher level of online skills and self-efficacy.

#### 3) Online usage

Online usage per day or the frequency of use is found to be related with digital opportunities and risks.

#### 4) Online expertise

Online skill is the children's and young people's certain online skills, i.e. the ability to find information, to send an instant message, to fix computer problems, to set up an email account, to download music, to set up a filter, and to remove a virus from their computer, which are perceived and specified by children and young people themselves.

Self-efficacy is one's self-reported skill level, which is found to be strongly influenced by one's self-confidence. When the youth perceive themselves as having higher level of online skills than others, it means they have greater online self-efficacy. Self-efficacy is found to be related to the users' socio-economic status and the length of their online experience; however, it is not found to be related to either online risks or online opportunities, but involves other intervening variables

The active variables that digital natives possess help to reveal both online opportunity and risk factors. Whether risks and opportunities are classified as a priority or not, there are still some hopes for the opportunities that the internet can offer to young people and at the same time there are fears of how the internet may bring particular risks to young people as well. To discipline online opportunities and risks, internet literacy is not the only essential value. Rather, its value depends on how it affects the ways in which the internet is used. Furthermore, to promote digital citizenship, online norms and practices for reducing risks and enhancing opportunities



for Thai digital natives towards appropriate digital behaviors should be created to keep up with trends in this fast-changing digital arena.

## **2.3 Concept of Digital Literacy**

Digital literacy, like media literacy, seeks to incorporate necessary skill-instructions to access, analyze, and evaluate all forms of information and communication. Definitions of digital literacy are numerous. Within this pool of definitions, terms often are interchangeable; for example, “literacy,” “fluency,” “competency,” etc. and all can be used to describe the ability to find, evaluate, accept, or reject information (Fieldhouse and Nicolas, 2008). While much is written in the name of digital literacy, consensus on a single definition of the phrase seems to be elusive.

### **2.3.1 Digital and Media Literacy**

The concept of digital literacy, the most generally used term, was introduced by Paul Gilster, in his book of the same name (Gilster, 1997). Gilster did not provide lists of skills, competences, or attitudes, nor did he define what is digitally literate. Rather, he explained it simply as an ability to understand and to use information from a variety of digital sources in the digital age. It is thus the current form of the traditional idea of literacy, or the ability to read, write, and deal with information through the use and formats of technologies of the time, and an essential life skill. Gilster’s idea might irritate some commentators, but it is one of his strong concept that can go beyond some restrictions of information literacy. However, Gilster was not the first one who used the phrase “digital literacy” since it had been applied throughout the 1990s by a number of authors to mean it as an ability to read and comprehend information in the hypertext or multimedia formats, available since then. (Bawden, 2001).

According to Bawden and Robinson (2002), the term ‘digital literacy’ (or digital information literacy) has been widely used in the literature in spite of some confusions. Many terms have also been used to portray the same or similar meaning, i.e. computer literacy, IT literacy (or information technology literacy), electronic

literacy (or electronic information literacy), library literacy, media literacy (or mediacy), and network literacy (or Internet literacy or hyper-literacy).

Among these terms, another typical one is “multimedia literacy” of Lanham (1995), which is quite different from traditional literacy. His argument was that since a digital source could generate many forms of information, i.e. text, images, sounds, etc., a new form of literacy was necessary to make sense of these new forms of presentation. While this is certainly an important aspect of the wider concept of digital literacy, it is still too restrictive, and too much influenced by the technology of its times, especially to be of as much lasting value as Gilster’s broader conception. Several conceptions are reviewed by Eshet-Alkali (2002), who concludes, like Gilster, that digital literacy must be more than the ability to use digital sources effectively. Further than that, it is a special kind of mindset or thinking pattern.

A broad definition of “digital literacy” nonetheless is provided by Martin (2005), who acknowledges other related “literacies,” such as ICT literacy, information literacy, media literacy, and visual literacy, which gain new or increased relevance in the digital environment. He describes digital literacy as “the ability to succeed in encountering with electronic infrastructures and tools that make possible the world of the twenty-first century.” (Martin, 2005)

Concerning digital literacy and e-learning, Martin sees the needs for mastering electronic tools as crucial for a success in learning communities. He also contends that digital literacy involves “acquiring and using knowledge, techniques, attitudes, and personal qualities and includes the ability to plan, execute, and evaluate digital actions in the solution of life tasks, and the ability to reflect one’s own digital literacy development.” (Martin, 2005)

The term “digital and media literacy” covers the competencies in cognitive, affective, and behavioral domains. The competencies thus cover the use of texts, devices, and technologies, critical-thinking and analysis skills, message composition and creativity, reflection engagement, and ethical thinking, including active participation through teamwork and collaboration.

Confusing terminology makes it difficult to develop and use the concept. Eshet-Alkalai & Amichai-Hamburger (2004) suggests that “indistinct use of the term causes ambiguity, and leads to misunderstanding, misconceptions, and poor

communication,” and that there is a particular inconsistency between those who regard digital literacy as primarily concerned with technical skills and those who see it as focused on cognitive and socio-emotional aspects of working in a digital environment.

While some scholars during this period used the “digital literacy” terminology in Gilster’s sense, a broad concept is emphasized on knowledge assembly from diverse sources and on critical thinking while some still equate it with “computer literacy”, focusing on IT skills, as part of a wider information literacy (Williams, 2007), or with “network literacy”, focusing on effective use of internet and other networked resources. All these aforementioned literacies focus on “critical thinking,” covering the critical and tactful use of language, the critical evaluation of website, the analysis of visual content on the web, the analysis of digital information for credibility, logic and embedded emotional content, and the practice of good ethics and etiquette on the internet. Other uses of the term are noted by Eshet-Alkalai (2004).

The concept of digital literacy received relatively little attention, compared with the enthusiasm for the more prescriptively defined “information literacy,” used as the basis for many training programs and tutorials, particularly in higher education. Some attempts were made to derive specific lists of competences from Gilster’s conception for use in training programs (Bawden, 2001), but these seem a somewhat inappropriate development, and have not gained wide interest.

Definitions of digital literacy are more substantial and have been adopted at a national level in the U.S., Australia, New Zealand, and in the U.K. In 1989, the Final Report of the American Library Association Presidential Committee on Information Literacy stated that, “To be information literate, a person must be able to recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information.”

Gilster’s concept of “competence with knowledge assembly” represents the bringing together of existing and new knowledge and can be considered as functioning at two levels in the realm of information literacy:

- 1) the pre-search activity of gathering what is already known in order to identify knowledge gaps

2) the post-search activity of organizing, managing, and processing the newly-found information in such a way as to build new knowledge.

Accordingly, the “information literacy” terminology is still used for concepts seemingly very close to Gilster’s. An example is a training program in “information and critical literacies,” which offers a non-linear adaptation of the traditional linear model of information literacy instruction (Markless & Streatfield, 2007), which has three inter-linked elements: 1) connecting with information (orienting, exploring, focusing, and locating) 2) interacting with information (thinking critically and evaluating) 3) making use of information (transforming, communicating, and applying)

With its non-linear structure and emphasis on critical thinking and communication, this seems very similar to Gilster’s digital literacy, despite the alternative choice of name.

Consequently, the more general digital literacy concept, with specific recognition of Gilster’s concept as its basis, was used as the basis for a two-week professional development course for library/information specialists from Central/Eastern Europe and Central Asia at the Central European University in Budapest, from 1997 to 2001 (Bawden & Robinson, 2002).

The course initially focused very much on skills and competences for effective use of the internet (Robinson, Kupryte, Burnett, & Bawden, 2000), but as participants, year-on-year, came with greater familiarity with this, it changed the focus to consider more general aspects of the use of information sources generally and networked information in particular. Gilster’s digital literacy was used explicitly as the unifying theme. In the context of the new countries and emergent democracies of this region, the idea of digital literacy, and particularly its critical thinking component, proved to be a valuable focus for structuring the course. Indeed, the promotion of critical thinking within a digital literacy framework has been put forward as one of the principles that underlie the role of libraries and other information providers in supporting open societies (Robinson & Bawden, 2001).

A renewed interest in Gilster’s digital literacy ideas, ten years on from the original publication, may be seen, most notably in an edited book with the phrase in its title, and with a chapter contributed by Gilster (Secker, 2007). [Though the

publication date of the book suggests an earlier appearance, it appeared almost exactly a decade after Gilster's original.] The preface acknowledges the significance of Gilster's concept a decade on in a world in which networked information has expanded into all aspects of life and in particular the importance of "ideas, not keystrokes" at its basis.

Debates on the definitions due to their covering of a diversity of skills and competencies, from very clear and fundamental to very subtle and complex ones, require to be concerned under media and information circumstances nowadays. Accordingly, a broader approach is needed and this approach to media literacy, which expands the dimension of internet literacy, consists of the following:

1) Access. It is an internet literacy that requires an ability to online access: hardware, content, and services, and an ability to manage access conditions.

2) Understanding. It is an internet literacy that leads to an effective, thorough, and censorious evaluation of online information and opportunities.

3) Creation. It is an internet literacy that helps internet users to be an active creator and receiver of online content and to be able to interact and participate online.

All these literacy dimension support one another and penetrate in all parts of human life: leisure, education, work, relationships, health, civic participation, etc. As a consequence, internet literacy (or media literacy in a broader term) is more indispensable. Without it, social exclusion and inequality may be counted.

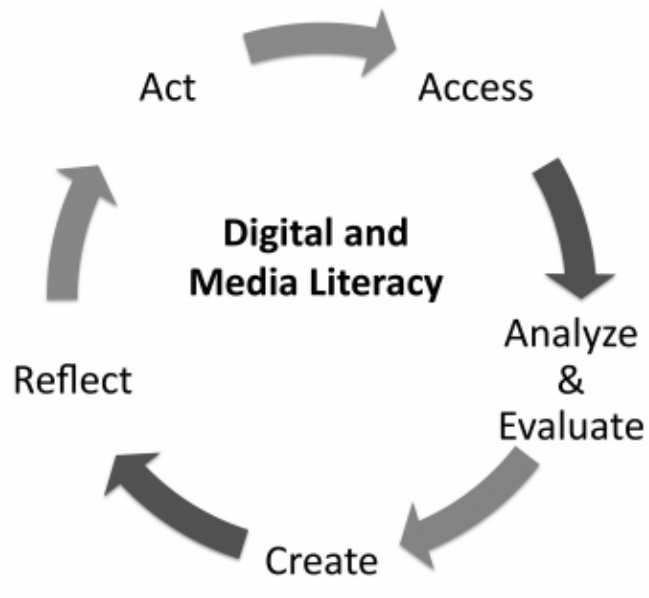
Digital literacy efforts empower the youth to analyze, interpret, and create images and information that are disseminated in digital environments. They provide skills so that the youth can interpret complex messages in an informed and knowledgeable way and, thereby, counteract the temptation to react without forethought to the influence of powerful words, images, and sounds. Therefore, children need instruction on the application of skills for critical analysis and ethical decision making. The access to massive amount of information necessitates a competency in gauging the quality and accuracy of information. In turn, students have an obligation to consider the implications of communication that they initiate via communication technologies because the network of recipients is so expansive.

Messages become publicly accessible and have major implications, many of which may be negative.

Another important component of digital literacy is a respect for the online property of others. This includes appropriate use of copyrighted material and respect of the others' privacy rights in computer space. Students should be reminded that unauthorized access to computer networks or the unauthorized use of the passwords of others is against ethical practices and can have legal repercussions. In conjunction with early preparatory experiences that engage a child in assessing risky situations, developing appropriate coping techniques, and practicing responses to problematic situations, children can be adequately prepared for our media-saturated culture.

The youth need to apply these skills of digital literacy in their use of information on the internet and from other information technologies. However, it is regretful that the process of integrating media studies, especially digital literacy, into education is relatively slow despite the fact that digital literacy is not a new issue in this cyber world nor a new area of social studies. All educational institutions thus should emphasize their educational standards concerning digital literacy, especially competencies in understanding media points of view, critical thinking skills for analyzing and evaluating the credibility of information, abilities in accessing diverse forms of information, and various kinds of exposure to digital environments.

With digital and media literacy competencies, it is easier for people to catch up with hidden agendas, whether they are personal, corporate, or political. Importantly, being equipped with these necessary competencies, they can recognize any missing voices or perspectives and can speak for those omitted ones. They can also help to identify problems and to solve them through their voices and rights under the law to improve the world around them. It is commonly agreed that in all aspects of our daily life, an effective communication and problem-solving skills are needed, and digital literacy and the following essential competencies are also needed in this digital world: access, analyze & evaluate, create, reflect, and act as shown in Figure 2.3.



**Figure 2.3** Essential Competencies of Digital and Media Literacy

**Source:** Hobbs, 2010.

The details of these essential competencies of digital and media literacy are illustrated in Figure 2.4.

<b>Essential Competencies of Digital and Media Literacy</b>	
<b>1. ACCESS</b>	Finding and using media and technology tools skillfully and sharing appropriate and relevant information with others
<b>2. ANALYZE &amp; EVALUATE</b>	Comprehending messages and using critical thinking to analyze message quality, veracity, credibility, and point of view, while considering potential effects or consequences of messages
<b>3. CREATE</b>	Composing or generating content using creativity and confidence in self-expression, with awareness of purpose, audience, and composition techniques
<b>4. REFLECT</b>	Applying social responsibility and ethical principles to one's own identity and lived experience, communication behavior and conduct
<b>5. ACT</b>	Working individually and collaboratively to share knowledge and solve problems in the family, the workplace and the community, and participating as a member of a community at local, regional, national and international levels

**Figure 2.4** Details of Essential Competencies of Digital and Media Literacy

**Source:** Hobbs, 2010.

These five competencies work together in a spiral of empowerment, supporting people's active participation in lifelong learning through the processes of both consuming and creating messages. This approach is consistent with constructivist education, described by a Brazilian education scholar, Paulo Freire, "a concept of women and men as conscious beings...and with the posing of the problems of human beings in their relations with the world" (1968). These five digital and media literacy competencies represent a synthesis of the full complement of scholarship and thinking about "new literacies." The ideas have been acknowledged by major groups and professional associations including the International Reading Association (IRA), the National Council of Teachers of English (NCTE), and the National Council for Accreditation of Teacher Education (NCATE), etc.

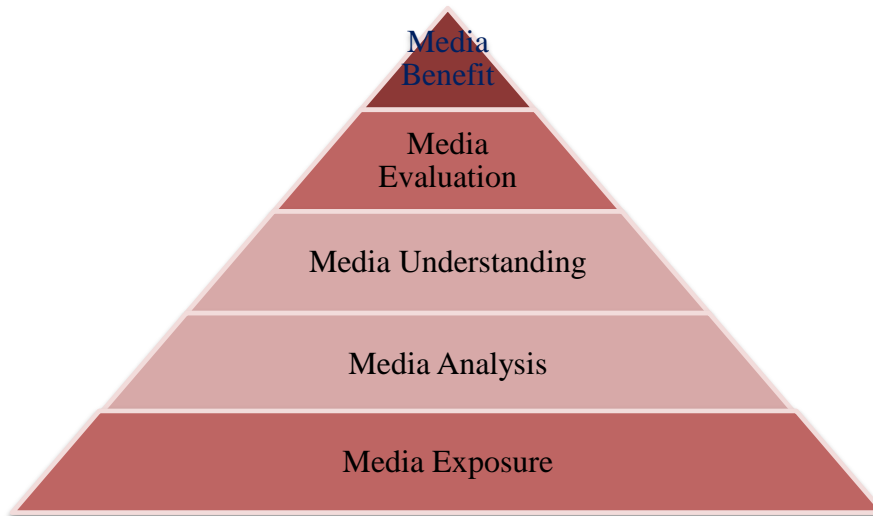
The importance of digital and media literacy skills are recognized as essential skills for teachers in education, as stated by the Professional Standards for the Accreditation of Teacher Preparation Institutions, "Teachers understand media's influence on culture and people's actions and communication; as a result, teachers use a variety of approaches for teaching students how to construct meaning from media



and non-print texts and how to compose and respond to film, video, graphic, photographic, audio, and multimedia texts” (NCATE, 2008). Correspondingly, the National Council of Teachers of English encouraged “preservice and in-service staff development programs that will focus on new literacies, multimedia composition, and a broadened concept of literacy” (NCTE, 2003). Furthermore, media literates are also promoted by the National Communication Association (NCA, 1998) with the following abilities:

- 1) an ability to understand how media is used in people’s personal and public lives
- 2) an ability to recognize the content of media and the complex networks of the audience.
- 3) a sense of appreciation towards the production of media content appropriate for social and cultural contexts.
- 4) an ability to understand that media needs to survive and requires some commercial support.
- 5) an ability to choose appropriate media to communicate to specific audiences

Media literacy is one of the topics highly concerned by UNESCO. For Thailand, as one of UNESCO members, UNESCO published “The Body of Knowledge of Media Literacy in Thailand” suitable for Thai culture and contexts for Thai schools and policy makers in education as parts of the courses for developing and preparing children to be aware of their exposure and use of media, including different kinds of its effect and influences. The said Body of Knowledge of Media Literacy in Thai context contains 5 hierarchical dimensions or, in other words, it requires a fulfilment of the lower-dimension before moving upward to the next dimension, as illustrated in Figure 2.5. (Porntip Yenjabok, 2011):



**Figure 2.5** The Five-Dimension of the Body of Knowledge of Media Literacy in Thai Context

**Source:** Pornthip Yenjabog, 2011.

1) Media Exposure. The literacy of this dimension involves the process of recognizing emotional appeals for business purposes presented in the media. It is a balance between reasons and emotion after media exposure. It is an ability of a person to be able to differentiate what is constructed by the media and what is reality; thus, he or she will not be tempted by commercial attempts.

2) Media Analysis. This literacy refers to the decomposition of the media by their objectives of presentation which helps in understanding the reality of the media. This includes,

- (1) media target audiences
- (2) how media content affects the society, economics and politics
- (3) media presentation format
- (4) media's facts and opinions
- (5) factors related to the society, ethics, historical backgrounds, values, and norms that media represents under the code of conducts of media.

3) Media Understanding or Media Interpretation. This dimension of literacy occurs after media exposure. In this dimension, the audience with different

experience, educational background, and ability in acquiring information have different media understanding.

4) Media Evaluation. In this dimension, the audience evaluate the qualities and values of media by its content, formats, and techniques for his or her own benefits and proper gratifications.

5) Media Benefit. After the audience are equipped with the previous 4 dimensions, an appropriate media use is another important factor to live in the media world. To maximize media benefits, it includes

- (1) applying the analyzed knowledge for further uses
- (2) selecting proper media
- (3) useful information-sharing,
- (4) having an ability in media interaction
- (5) creating media content for a specific purpose that is beneficial to

Thai society.

A notable connection between digital and media literacy and social studies is the promotion of citizenship skills within a global environment. “Media education is the entitlement of every citizen in every country of the world towards freedom of expression and the right to information, and is instrumental in building and sustaining a democracy.” (UNESCO, 1999) This literacy is necessary for an electorate who is knowledgeable about accessing credible information via communication technologies and about analyzing the intent of messages as well as their value for civic involvement.

## **2.4 The Concept of Citizenship**

The notion of democracy occupies a priority place in the society; however, people, the owner of the country, enact their right for the betterment of the society. According to Aristotle (cited in Sison and Fontrodona, 2011), “a citizen in the strictest sense, against whom no such exception can be taken” is he who “shares in the administration of justice, and in offices”. The essential task of a citizen is to participate in deciding what is good and just in a state and carrying this out. A citizen is a “juryman and member of the assembly”, who “reserves the right of deliberating or

judging about some things or about all things”. Although many people in a state may actually participate in deliberating and deciding on the public good, legally only citizens possess this right as what characterizes a citizen is “the power to take part in the deliberative or judicial administration of any state”.

From Aristotle’s definition, the role of a citizen in democratic society is to build and govern the country by maximizing his or her right in participating and determining the country direction for the public interest under the justice-oriented aspect. While the discussion of Cohen (2005) reveals that full citizenship is made up of both right (civil, social, political, cultural and ethnic) and obligations that together are bound to form the status of nationality. Hence, a part of citizenship function is bolstering the others.

As an entitlement to recognition, respect and participation are defined for citizenship, it involves an interaction with other people at several levels: group, community or societal, and national (Neale, 2004). Thus, a citizen under the desirable democracy feels as a part of the society and the nation while interacting with people in a meaningful way. On the other hand, a citizen has to aware of both obligations and rights. It is said that the more opportunities a citizen has to interact with others in a society, the more active citizen he or she can be when he or she actively participates in the society. This accords with the notions of James (2004) that the expectation of children’s roles as participants and the opportunities for exercising their citizenship in each society around the world is different. Christensen and James (2008) state that in some countries, the participation of children as citizens is very low. They will seldom be allowed to take parts even in determining some fundamental structure, i.e. their ways of lives at home or at school, etc. Especially, in some countries, the laws forbid them to do so in spite of universal rights of children claimed by the United Nation Convention on the Right of Child (CRC). Therefore, children can exercise and articulate their rights of determining their ways of lives differently within the nation and across the nations.

Besides, each country has different nature of citizenship (Westheimer & Kahne, 2004). Different countries emphasize the notion of democracy at different aspects: some focus on freedom while some on equal opportunity. Other examples, some countries boost the concept of civic society, some encourage social changes for

better lives, i.e. free market, some value voluntary work for social contribution, and some allow full political engagement, i.e. voting, auditing, protesting, or joining social and political movement. In spite of all differences, all countries increasingly aim to nurture their “good citizens” in parallel to democracy-oriented cultivation through their educational programs.

### 2.4.1 Three Kinds of Citizen

In supporting a desirable democratic society, Westheimer and Kahne (2004) suggest that there are three key attributes of “citizenship” or three kinds of citizens: personally responsible citizens, participatory citizens, and justice-oriented citizens (see Table 2.1).

**Table 2.1** Three Kinds of Citizens

	<b>Personally Responsible Citizen</b>	<b>Participatory Citizen</b>	<b>Justice-Oriented Citizen</b>
<b>Description</b>	Acts responsibly in his/her community Works and pays taxes Obeys laws Recycles, gives blood, etc. Volunteers to lend a hand in times of crisis	Acts as an active member of the community, organizations, and / or improvement efforts Organizes community or organization efforts in caring for those in need. Promotes economic development Cleans up environment Knows strategies for accomplishing	Critically questions, debates, and changes established systems and structures when they reproduce patterns of injustice over time

**Table 2.1** (Continued)

	<b>Personally Responsible Citizen</b>	<b>Participatory Citizen</b>	<b>Justice-Oriented Citizen</b>
		collective tasks	
<b>Core Assumption</b>	To solve social problems and improve society through this kind of citizens, citizens must have good character, be honest, responsible, and law-abiding members of the community	To solve social problems and improve society through this kind of citizens, citizens must actively participate and exert leadership positions within established systems and community structures	To solve social problems and improve society through this kind of citizens, citizens must question, debate and change established systems and structure when they reproduce patterns of injustice overtime

**Source:** adapted from Westheimer & Kahne, 2004.

#### 1) Personally Responsible Citizens

Personally responsible citizens are those responsible for their community by acting to comply with laws, i.e. working, paying taxes, no incurable debts, etc. Besides, they will express their good deeds towards social contribution, i.e. giving blood, recycling, donating food or clothes, assisting the elderly, volunteering, helping people in time of crisis, such as snowstorm, floods, etc., either by their time or money.

#### 2) Participatory Citizens

Participatory citizens are those who have a social participation at all levels: community, societal, and national. Educational institutions have a role in teaching children towards participatory citizenship through their programs and activities, which help them to understand the roles and work process of government and other related institutions surrounding them, i.e. school, community, organizations,

churches, etc. Besides, the roles of participatory citizens and how to participate in those processes, such as their contribution towards school policies or improvement.

### 3) Justice-Oriented Citizens

Justice-oriented citizens are those who concern about social, political, and economic condition, who evaluate those conditions and look for ways to solve or call for an action against any injustice and unfairness they find. However, this kind of citizen is the least pursued. The vision of justice-oriented citizens often goes together with the participation of participatory citizens by putting an emphasis on collective work related to life and issues of the community. In other words, if participatory citizens are organizing a drive for food, personally responsible citizens will donate food while justice-oriented citizens will ask why people are hungry and act on what they discover. Citizens who emphasize social justice will often more worried when citizens get together for social movement, but fail to focus on or to critically analyze social economic, and political structures that generate problems, or the roots of the problems.

There is no universal principles or guidelines for practices that help different countries to improve competitive competencies of the countries and to reach their aims. Different contexts of the countries occupy different strength and weakness in developing their potentiality; however, one kind of development that every country shares in common is the development of their human resource. In developing their people, it is necessary to understand their social roots as well as global changes.

#### **2.4.2 Citizenship in Thailand**

In Thailand, as we are now in the age of knowledge-based society, and rapid change of information communication technology, it is vital to equip Thai citizens with their roles in maximizing the benefits from this fast-moving change. Similar to other countries, Thai people are to be groomed as global literate citizens in the digital age. In cultivating citizens, the comprehension of human diversity is required in a pluralistic society. According to Thipaporn Tuntisoonthorn, (2012) the implementation aimed for encouraging people's participation and for promoting education relating to democracy and human rights will help to unite this diversity, and finally, will help to contribute to the development of the country in every aspect. Since Thai people are a major factor of the

country development. It is necessary to foster the sense of their membership and ownership, including their responsibility for a society.

The aim of education for cultivating citizens is to equip them with the capability of participation for social responsibility at both local and national level. It is essential to encourage citizens to concern about their social issues. Thus, the target of active-citizenship cultivation is to implant some essential characteristics of Thai citizens in the democratic society, which include (Thipaporn Tuntisoonthorn, 2015):

- 1) global and social literate member of the society
- 2) public-interest oriented
- 3) socially responsible and freedom-oriented
- 4) justice-oriented
- 5) critical thinking
- 6) respect for human rights and diversity
- 7) law-abiding
- 8) political literate
- 9) peace-oriented

Seeking for a proper concept of citizenship in Thailand is challenging, especially in making it to be understood from the point of view democratic approach. Besides, to create a citizen with a sense of public concern through educational system, both formal and non-formal, is what every sector in the society puts high concern or considers as one of the priorities in the 21<sup>st</sup> century society.

## **2.5 Concept of Digital Citizenship**

Earlier, democracy and economic growth had been promoted by traditional education. In a similar way, internet can do it. Moreover, internet can provide potential benefits for a society, especially facilitating an individual's membership and participation since the digital citizenship encourages members to be included or social inclusion in online society in spite of wherever they live in a physical world. Accordingly, information technologies are perceived as a provision of a safe place and prevailing standards of the civilized countries. (Warschauer, 2003).



As a result, the acquired skills are not only basic skills required for physical world, but also extended to digital world, in which an environment fundamental to democratic society is enhanced, i.e. a dissemination of online information, platforms facilitating a diversity of cultures, the rights to participate socially, economically, and politically, etc. Accordingly, the notion of competence further refers to “an ability to mobilize and deploy relevant values, attitudes, skills, knowledge and/or understanding’ in the context of democratic society.” (Council of Europe, 2016). Correspondingly, the Reference Framework of Competences for Democratic Culture is not only aimed at an education for developing democratic citizenship and for promoting human rights and intercultural communication in pluralistic and democratic society but also an education towards digital citizenship.

However, digital citizenship is not a clear-cut concept. Rather, it involves several terms and a diversity of the youth’s issues, related directly or indirectly to their physical and psychological well-being and their responsibilities as digital users. In general, the concept does not cover only an access to technology, i.e. internet connection, the use of digital devices, mobile phones, and other technologies, etc. including desirable digital citizens and characteristics.

Generally, digital citizenship consists of a set of skills: thinking critically, behaving safely, and participating responsibly in the digital world. It includes appropriate and responsible behaviors in the related areas, such as internet safety, privacy, reputation, identity, communication, collaboration, copyright, creativity, and skills concerning information inquiry and evaluation of trustworthiness of online information. In addition, digital citizenship includes the deliberate use of digital tools based on appropriate age and the consideration of the impact on different levels or contexts: personal, family, school, social, and community. In general, digital citizenship education goes hand in hand with that of media literacy. (Common Sense Kids Action, 2017)

Moreover, digital citizenship does not only focus on an ability in using digital tools and technologies and an ability in evaluation of digital tools, content, and effect, but it also refers to an ability to engage actively, critically and competently in this digital environment. Therefore, it includes the skills of effective communication and creation, and social practices and participations that reflect a respect for human rights

and dignity through the responsible use of technology. A Reference Framework of Competences for Democratic Culture developed by The Council of Europe. This framework is aimed to be used in primary and secondary schools, higher education, and vocational training institutions throughout *Europe* as national curricula and teaching programs. Such framework can be considered as the introduction and guidelines to digital citizenship. (Council of Europe, 2016) It believes that in participate actively in a society or culture of democracy, a number of skills are needed, but these skills are not innate but learned and practiced. (Council of Europe, 2008). Accordingly, education plays an important role in helping the youth to acquire these essential knowledge, skills, and competences, and in preparing the youth to learn, to live, and to participate as active citizens in digital environment.

To help children learn how they can be safe and secure in the digital world while at the same time be a discerning and effective participants, the concept of digital citizenship should be viewed from a holistic and positive approach. Children should be taught to understand their rights and responsibilities, digital benefits and risks, and consequences of their actions caused by unethical practices in digital sphere (Collier, 2009). Digital citizenship is closely aligned to the traditional civics. Putnam (as cited in Bosin, n.d.) raises up three civic virtues: active participation in public sphere, trustworthiness, and reciprocity. He further states that if people understand these three civic virtues, they can play their active roles and bring about a prosperity to their community and society.

Hence, “digital citizenship” helps teachers, technology users, and parents to collaboratively understand the appropriate ways for students or children to use technology. Thus, this concept is not only a teaching tool but norms of appropriate and responsible use (Ribble, Bailey, & Ross, 2004) to prepare students and children towards a society full of technology with a great awareness and responsibility. Up to now, there have been evidences showing a high number of technological misuse and abuse. Consequently, the following nine dimensions of digital citizenship are developed:

- 1) Digital Access: to be able to enter an electronic world

First of all, it should be aware that opportunities of digital or technology uses are not equal for people in a society. Therefore, the first attempt through the

concept of digital citizenship is to let all people be able to have equal rights in accessing technologies. Without this equal right, it is hard to make a society grow. Therefore, to accomplish a productive citizenship, all should have an equal digital access.

2) Digital Commerce: to buy and sell goods through electronic or E-Commerce

It should be understood that now large amount of commercial transactions and economics is conducted online. However, it should also be realized that in spite of some legal online transactions for goods and services, i.e. to make an order through internet, to buy things like clothes, toys, food, etc. online, etc., a lot of illegal and unethical conducts are also easy to witness, i.e. illegal downloading, gambling, pornography, etc. Therefore, technology users need to learn how to be safe and be an effective consumer in a new digital economy.

3) Digital Communication: electronic exchange of information

Before, the 21<sup>st</sup> century, people had relatively limited forms of communication; however, after that advanced technology induce rapid changes around the world, and one of the most distinctive revolution is the ability of people to communicate across time and places or to communicate without any time or boundary limit. A diversity of communication devices, platforms, have been introduced, i.e. internet, SmartPhones, instant messaging. However, many users are still unable to cope with different digital communication options.

4) Digital Literacy: Teaching and learning on technology and the proper use

Besides knowledge on technology infusion, new technologies, such as online sharing, etc. and their effect including how they should be used might have not been taught widely in schools, so they must be focused. In addition, a number of occupations rely on immediate information (i.e. just-in-time or JIT system) that needs high skills in searching and processing or namely needs information literacy. In addition, due to rapid growth of technology and changes, how to keep up with them is essential. Therefore, such skills to participate in a digital world timely and properly, especially in the 21<sup>st</sup> century, across time, and place in different contexts (i.e. business, political, medical, etc.) need to be learned.

#### 5) Digital Etiquette: online conduct or procedure standards

One of the problems found in digital citizenship is that people feel uncomfortable when they face improper manner or conduct while communicating or interacting with others online but, on the other hand, these problems are not learned. Although rules and regulations, including several policies, have been issued to prohibit any inappropriate behaviors online, people should be cultivated and taught to learn how to be responsible digital citizens in this new society.

#### 6) Digital Law: responsibility for online actions and deeds

Digital law involves with the laws of technology use in a society. Theft and crimes in the internet are examples of illegal use and are considered as unethical use. Thus, technology or online users can act as ethical citizens by complying with the stipulated laws. People need to learn that to steal or causing any damage to other people's identity, work, and property is a crime. Illegal online uses also include hacking into others' information, stealing others' identity, downloading any piece of work without permission, copying ideas or plagiarism, creating destructive viruses (i.e. Trojan Horses), delivering spam, etc.

#### 7) Digital Rights & Responsibilities: online freedom and duties

This dimension of digital citizenship deals with freedom provided for all users in a digital world. For instance, Bill of Rights, issued by the American Constitution, provides a set of rights for every digital citizen, i.e. right of privacy, free speech and expression, etc. However, to apply these basic digital rights righteously have to addressed, discussed, and understood in parallel to the responsibilities they have to commit. For example, freedom has to be exercised in an appropriate and respectful way. Thus, as digital citizens, similar to national citizens, rights and responsibilities must come together to enable a society to be productive.

#### 8) Digital Health & Wellness: physical and psychological well-being in a digital world

Digital citizenship involves an understanding of how to protect online users from physical and psychological effects or damage caused by improper use of technology, i.e. eyes, office syndrome, etc., especially psychological damages, such as stress, internet addiction. Therefore, the dangers and effect of technology or online use are to be taught through education and training.

9) Digital Security: online precautions.

Similar to any society in physical world, in digital community, there are thefts, deception, dangers, etc.; therefore, precautions should be aware and prepared. In a physical world, we cannot trust anyone nor can in a digital world. At home, we have to lock our doors and install alarms for self-protection. Similarly, we have to install an anti-virus program, back up our data, and surge control of our equipment. Accordingly, as responsible citizens, we have to conduct a self-protection program and mechanism against any disruption or harm from outside.

From these nine elements or dimensions of digital citizenship, Ribbles (2004) classifies them into the concept of REPs, as hierarchical guidelines for teaching. The concept divides these nine elements or dimensions into three main groups or three REPs, each REP contains 3 elements or dimensions. The first REP or the first three elements are planned for teaching since Kindergarten level and then the second and third REP at higher education level in sequences. Consequently, all nine elements in the concept of REPs will be taught continually and enables learners to understand the fundamental ideas of digital citizenship. The classification into three REPs according to this concept is as follow:

- 1) REP 1: Respect Yourself and Others
  - (1) Digital Etiquette
  - (2) Digital Access
  - (3) Digital Law
- 2) REP 2: Educate Yourself and Connect with Others
  - (1) Digital Communication
  - (2) Digital Literacy
  - (3) Digital Commerce
- 3) REP 3: Protect Yourself and Others
  - (1) Digital Rights and Responsibilities
  - (2) Digital Security
  - (3) Digital Health and Well-Being

Collier (2009) also offers another approach to cultivate children towards desirable digital citizens, which includes knowledge, awareness, and skills in three areas across all curricular disciplines as follow:

**Safety & Security:** Understanding the risks from others and from our own behaviors, and an awareness of dangers of some risks in the application, i.e. virus, phishing, etc.

**Digital Literacy:** Understanding and skills in searching, classifying, managing, evaluating, and creating content or information in digital world. Despite some similarities to traditional literacy of reading and writing, digital literacy is, in some ways, distinctive.

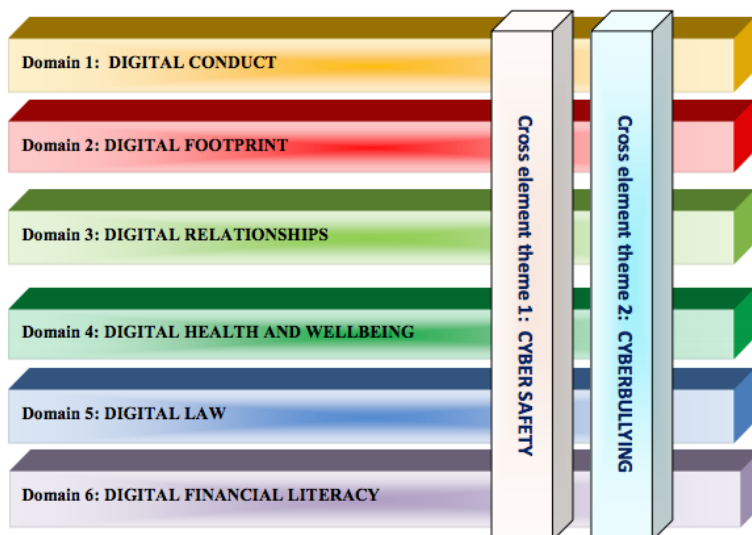
**Ethics & Community:** An awareness and understanding of appropriate and ethical behaviors in digital environment, including a concern on one's and others' reputation and responsibilities in participating in social networks, playing games, and in expressing their ideas in civic forums.

In summary, a digital citizen refers to a person who uses information technology or IT for his or her engagement and participation in society, politics, and civics. Mossberger et al. (2011) add that the technology or internet use of digital citizens must be in regular and effective way. To be qualified as a quality digital citizen, a person must possess extensive skills, knowledge, awareness, and access for using the technology or internet through various devices, i.e. computers, mobile or SmartPhones, etc. in interacting with others or with organizations, both private and public. However, a gap between those being realized as digital citizens and digital literates and those who cannot even access to the internet still exists and should be concerned.

### **2.5.1 Application of Digital Citizenship Concept**

Many private and public organizations, either international or global, are now aware of cultivating digital citizenship. In the United Kingdom, Digital citizenship is not just about recognizing and dealing with online hazards, but it involves building safe spaces and communities, establishing an understanding of how to manage personal information and internet savvy, and using internet and technologies to shape their world, both physical and online, in a safe and creative way, while inspiring others to conduct in the same way. (Digizen, n.d.)

In accord with the aforementioned digital citizenship, concerned organizations in many countries have tried to help achieve such goals. For instance, in Australia, New South Wales (NSW) Department of Education and Communities strengthens the concept of digital citizenship through its “Cybersmart digital citizenship,” which highlights a confident and positive engagement with digital technologies. “A Cybersmart digital citizen” is thus a person with sophisticated skills and knowledge towards effective use of digital technologies in order to participate in a society, to communicate with others, and to create and consume digital content in a positive and creative way. To achieve such expectation, the NSW Digital Citizenship Model contains six key domains under two interwoven themes as illustrated in Figure 2.6.



**Figure 2.6** The NSW Digital Citizenship Model

1) Digital conduct: This domain refers to one’s rights and responsibilities in a digital world, including one’s ethical, responsible, and respectful use of digital technologies. This domain comprises positive online conducts and codes of digital ethics or so called “netspeak” or “netiquette.”, including some notions about proper online con, courteous email-forwarding, a thorough thought before posting. Besides, it covers the knowledge of how to deal with online inappropriate or suspicious behaviors, i.e. advertisements and pop-ups, and to report these

irregularities to enhance digital security. On the other hand, it includes a notion of privacy and safety while sharing online information and of how the use of technologies helps to enhance interpersonal relationship, including introducing users towards collective responsibilities, i.e. to realize that online community is also their community, to be aware of the values of good digital citizens, and to develop themselves to be good digital citizens in future.

2) Digital footprint: This domain refers to an understanding that nothing online is confidential nor will fade away. On the contrary, it will leave some trails and what appears online will last for years. Therefore, most employers and police officers can trace to one's story and information so this domain emphasizes how online information can be used in business, in police investigation, etc. Accordingly, this domain encourages the importance of the trail left by an activity in a digital environment and an awareness of potential consequences before posting any images, information, blogs, including consequences of a webcam usage. Consequently, this domain aims to cultivate students to be both positive creators and users of online content. On the other hand, it boosts the use of technologies towards collective or public benefits, i.e. social learning, pooling or sharing of knowledge, resources, reflections, ideas, etc. A good balance between public concern and personal protection is thus needed. As a result, a person can gain a sense of self fulfilment and satisfaction with being a part of online community.

3) Digital relationships: This domain concerns about how to balance between an individual's protection and good relationships with others at several levels: online friends, group members in the networked society of all sizes. In other words, this domain pays attention to how to limit an individual's revealing of himself or herself appropriately or at appropriate level, that can help to give good impression of him or her, while knowing how to set his or her privacy and to protect his or her identity. On the other hand, he or she must respect others' rights of privacy and concern about the reputation of others while revealing any information or images about them, including being aware of any risks or damages that might happen to them, i.e. cyber stalking, unwanted contacts, etc. Furthermore, this domain also addresses the issues on the use of avatars, chat rooms, etc. and the responsibility to protect others from humiliation by considering words or photos that may hurt others. In short,



this domain aims to be aware of safe and responsible use of technologies and of any risks causing damages to oneself and to others to maintain good relationship in a digital community, and to know how to report any inappropriateness in the digital world for community benefits.

4) Digital health and wellbeing: This domain aims to encourage a balanced lifestyle between the time used online and relationships in the real world towards good health and wellbeing, both physical (such as occupation health and concerned effects, i.e. eye strain, office syndrome, etc.) and psychological (such as stress, internet addiction, etc.) to illustrate this, gaming is a part of this domain. Digital citizens may play games and chat with co-players from all corners of the world with fun, but on the other hand, they must be able to control their time and behaviors and to avoid risks, such as expressing no-risk identities, avoiding violence, and addiction, including avoiding bullying and abusing other players. Therefore, the focal point of this domain is to make students feel comfortable in social engagement in a digital world, be aware of undesirable consequences and effects, having a balanced lifestyle, and concerning about students' physical and mental wellbeing.

5) Digital laws: This domain emphasizes an understanding of legal responsibilities and obligations, i.e. intellectual property right, plagiarism, unquoted reference sources, etc. It includes the notion of P2P file sharing (Peer-to-peer file sharing), which is the distribution and sharing of digital media using peer-to-peer networking technology. Thus, this domain concerns about legal and illegal access to music, movies, and television shows, and about the dangers of creating viruses, forwarding spam and hacking, etc. Students are encouraged to have productive use of online resources for both studying and for entertainment, while understanding the potential consequences of illegal actions, such as plagiarism, unauthorized downloading data for their and others' use, etc.

6) Digital financial literacy: This domain focuses on how to be a cautious consumer in the digital economy, i.e. shopping online, financial security, online frauds, phony or insecure websites, as well as phishing and other scams that attempt to steal a user's personal details or an identity theft. This domain also includes online gambling and other paid games. Thus, a focus is on how to make use of

convenient services maximally with safety and responsibilities for oneself, one's family, and one's community as a whole.

#### Cross-Domain Themes

1) Cyber safety: This theme runs across all six domains. According to this theme, precautions on cyber security and personal online safety are the responsibility of every computer user or digital citizen. Thus, each computer user or digital citizen should have their safety and security action plans.

2) Cyberbullying: This theme runs across all six domains as well. It promotes the expectation that all students should be active in preventing cyberbullying and should understand that each cyber action can cause a widespread negative impact, due to the rapid dissemination and relative permanency of the message sent. Thus, students should understand forms of cyberbullying, bullying behaviors or hostile cyber behaviors. It is suggested that actions be taken if these hostile or bullying behaviors is experienced or witnessed.

As digital citizenship is essential and inevitable in this digital world, most countries try to develop their citizens to be desirable digital citizens, especially Australian government who initiated the concept of digital citizenship. Australia Media and Communication (ACMA) is one of the institutions that has tried to develop digital citizenship in its country, emphasizing their positive and creative engagement in the digital world. The institution plays a supplementary role, together with the Australian government, industries, and communities, in developing an educational program on cyber education. Its structure is an umbrella framework containing branches of tools and resources to strengthen online community networks. This plan calls for a collaboration between the government, concerned industries, and communities to promote a well-informed and thorough online choices. Especially, it emphasizes clear and easy-to-use online interactions and education on privacy and security settings. ACMA (2012) proposes three major principles for enhancing responsible digital citizens as follow:

1) Engage positively. It is suggested that one should be aware and think thoroughly before interacting online. Besides, they should be flexible when others do not possess standards of digital citizenship by focusing on public benefits.

To engage positively also refers to a respect for others and recognition of the importance of freedom of expression and personal privacy. It also includes an avoidance of unethical behaviors, i.e. harassment, bullying, online abuse, which can cause long-term negative consequences to both individuals and the whole community.

An education on the effect of one's action in digital environments is also highlighted in this principle, including a consideration of differences in rights and values in parallel to universal access to services and information, regardless of users' preferences and abilities, which lead to positive online engagement and participation.

2) Know your online world. This is the principle that tries to motivate technology users to use technologies with more self-confidence. However, to accomplish this expectation, users must know and understand different kinds of technologies, the opportunities provided in a digital world, how to use each kind of technologies safely and responsibly without risky dangers or negative consequences, and the roles of digital footprint. Especially, it is important that users must learn and develop some necessary new skills and knowledge to keep up with rapid changes. However, in practice, users must firstly feel familiar with their tentative technologies to get more confidence in doing so. They also must trust their online environment before any digital literacy can grow along with the evolving world.

### 3) Choose consciously

Before exchanges of personal information and online transaction, setting of privacy and security can help to avoid possible risks and dangers and to control users' online engagement and participation in digital world.

This principle also includes an installation of security systems to help solve the problems when needed and to respond them timely and appropriately.

According to UNESCO International Bureau of Education (2014), digital citizenship and cyber wellness have been found growing in recent years. Participants from various states, institutions/ organizations, and schools consistently expressed their needs towards a guidance for an effective education on this topic. This indicates that despite an apparent level of awareness and the assortment of existing resources and campaigns, a gap still exists. A call for programs and policy implementation on human resource empowerment and capability building has increased in response to

the growing concerns about the safe and responsible use of technologies, and towards minimal risks but maximal opportunities.

While digital citizenship becomes a priority in public education in a number of developed countries like the United States, the United Kingdom, Australia, etc. However, the accessibility to online use and chances for development of digital citizenship of many subgroups of world population (i.e. African-American, Latino, the less-educated and the poor) depends on people's education, income, race, and ethnicity. Therefore, technology misuse and abuse is a societal problem as much as it is an educational problem. However, to become a civilized technological society in the 21st century, technology leaders must possess a vision for effective and appropriate technology behaviors. Besides, digital citizenship must be the norm without any exception in a society. (Mossberger et al., 2008)

In summary, during these recent years, many scholars in child development have been working to extend traditional education and media literacy to the education on digital citizenship as the core lessons. Especially, in the 21<sup>st</sup> century, digital citizenship is even more important. Accordingly, it is necessary to teach students to learn about desirable digital citizenship: to engage, communicate, and interact safely and responsibly with others in digital world. However, the concept of digital citizenship tends to base on traditional notion of citizenship of each nation. Still, it is recommended that in this rapidly changing world, a consideration of including citizenship with broader circumstance should be focused, such as a consideration of global and cosmopolitan citizenship, and cultural and multicultural citizenship, as a way of understanding to overcome the limitation of traditional approaches to digital citizenship.

## **2.6 Related Studies**

This literature review on part of related studies, in spite of not being exhaustive, contains representatives of the depth and breadth of studies on digital natives, online behaviors, and digital citizenship. However, publications presented in this study are based on data gathered within Thailand and partly from studies abroad within a specific period of time between 2003 and 2018 mainly.

### **2.6.1 Related Studies related to Digital Behaviors of Digital Natives**

Panuwat Kongrach (2011) examined system addiction behaviors and system sickness behaviors on Facebook of 400 teenagers aged 13-24 years old. The results revealed that both system addiction and sickness behaviors resulted from perceived enjoyment and social influence. It was found that enjoyment on Facebook increased their frequency and duration of usage which later may lead to system addiction behaviors and system sickness behaviors. Teenagers became obsessed and anxious in Facebook usage and eventually, became addicted.

Lusk (2010) explored the patterns of teenagers' behaviors on social media and found a number of positive results. Teenagers could know how to effectively search for accurate health information, to maintain respectful relationships with peers on social networking sites, and to preserve and protect their online personal identity in a respectful and satisfying way. Beyond merely interacting with one another online, teenagers could experiment with new types of creativity on content sharing, learn how to solve problems, and deal with conflicting situations in virtual worlds, understand new and changing methods of communication to prepare themselves for post-secondary experiences, and explore their life aspects, all of which they were not allowed to do in offline world. From the study, it was suggested that a balanced and well-informed pattern of online behaviors should be prioritized since the youth and adults had to move into a new technology-oriented world together. Besides, online environments that could promote productive social media experiences for the youth should be created to minimize risks related to freedom of expression on the internet.

Amorn Thothong (2012), found differences of SmartPhone use with online connection between male and female teenagers. Male teenagers used online via SmartPhone to update news and to read newspaper and magazines while female teenagers use SmartPhone for relaxing themselves and updating entertainment news. However, both male and female teenagers perceived the effect of online access through SmartPhone surfing on their study performance and on family problems.

Przybylskia, Murayama, DeHaan, and Gladwell (2013) examined how individuals' personality, internet use, and the degree of their fear of 'missing out' impacted their physical and emotional well-being, including their personal relationship. The study was conducted by online questionnaires with 495 participants

aged 18-30 years old to measure their personality (openness to new experiences, conscientiousness, extraversion, agreeableness, and emotional stability), fear of missing out, and problematic internet use. The participants' conscientiousness, extraversion, emotional stability and agreeableness were positively related to overall subjective well-being. Both fear of missing out and problematic internet were found to provide additional significant negative contributions to overall subjective well-being. Fear of missing out and problematic internet use were negatively correlated with both emotional well-being and personal relationships but not physical well-being.

Suppakorn Chudabala (2014) studied the correlation between digital native's attitudes, behaviors and digital fluency, with quantitative method by survey questionnaires collected from 402 digital-native respondents aged 15-24 years old with 5-year experience or more in Bangkok area. From the results, attitudes and behaviors statistically significantly relate to digital fluency. Among all studied characteristics of digital literacy of digital natives, it was found that operating features and function of social network (i.e. creating comments, post reaction, information sharing, status setting, and inbox messenger) was the characteristic with the highest level while data verification from various resource when accessing to information in social network was found the lowest, due to insufficient time and credibility of information, especially when there were plenty of similar data from difference sources, as well as from their peers as data resources.

Niphon Darawuttimaprakorn (2015) investigated how sexual behaviors are related with their social media usage. Twenty male and female teenagers were interviewed. This study primarily revealed that teenagers with casual sex behaviors normally used social media as their key channel searching for sexual partners, while others who do not engage in such behaviors used social media for their communication only. However, there were 4 patterns of sexual relationships and behaviors of sexually active teenagers found in this study: (1) Being faithful to only one sexual partner without flirting with others, (2) Being faithful to one sexual partner with flirting with others, but without sexual contact, (3) Having one regular sexual partner and occasional sexual contacts with others, and (4) Indiscriminately engaging in sexual relationships. In addition, teenagers in Group 3 and 4 used social network

media such as Facebook, LINE, MSN, Hi5, etc., to find someone to have sex with while teenagers in Group 2 used social media in chatting or flirting with other people with no intention to have sex with, and Group 1 talked with people in social media only as friends.

Bu-nga Chaisuwan & Pornpan Prajaknate (2015) studied new-media use behaviors of 400 students aged 10-19 years old. The results showed that SmartPhone was the most frequently used new media among youth respondents. Regarding sedentary behaviors, respondents aged 10-19 spent one and a half hours per day using new media such as SmartPhone, Facebook and internet. The research recommended that government and others stakeholders should promote media literacy and digital fluency among young adolescents in order to encourage safe internet use.

Saowaphark Lampetch (2016) studied behaviors in using social media of 620 secondary school students in Nonthaburi Province. The average year of student samples' experience in social network was 7.29 years. The top three rank social media the samples students used are Facebook, LINE and Instagram respectively while the objectives found the most in using social media is talking with friends and assistance in homework.

NIDA Poll (2016) surveyed the most used devices of 4,800 children and youths aged 9-22 years old across Thailand. The findings were that the most used online social media were Facebook, YouTube, and Google respectively. Their objectives of online access were for a self-entertainment, information seeking, chatting with friends, photos and video posting, information exchanging, and online shopping. The reasons for exposing to inappropriate content, i.e. online gambling, cyber violence, and pornography, were due to their curiosity, self-entertainment, and a friend's persuasion. Besides, they post inappropriate content because it was the most shared content and because of their impetuosity and innocence. Moreover, the display of inappropriate action of the samples online were because they believed it was their personal right, they wanted to try new things, they wanted to become popular, and they could earn money from that.

Hor Kaw Newspapers (2017), revealed cyberbullying behaviors of 400 male and female students in a secondary school from its survey during 7-12 April 2017. The findings showed that both male and female students aged 10-15 years old bullied

others through Facebook and Line Application respectively. The ways these students bullied their friends through social media platform were embarrassment, violation of others' rights, privacy, and human dignity, including hate speech.

Boczkowski, Matassi, and Mitchelstein (2018) studied how young users in Argentina dealt with multiple platforms. The findings showed that the use of multiple social media platforms is ubiquitous among young people. Fifty young respondents, aged 18-29 years old, were interviewed. The result showed that young people managed such multiplicity partly by assembling repertoires of social media practices shaped by different clusters of meaning attributed to each platform. These clusters were usually constructed comparatively across social media, in two different but related patterns. First, they used all platforms in the same way. Second, the choices of platforms depended on their perceptions and sense-making of each platform, which often related references to other social media options. These clusters of meanings affected how, when, and with whom users communicated on social media. On the other hand, WhatsApp was used to share quick information with close friends and family; Facebook to reveal content that they wanted to disseminate widely; Instagram to post their selected and constructed portraits of everyday life; Twitter to get news and to comment about it; and Snapchat for fun instantaneous communication with close friends.

Pawnee Janekitiworapong and Pattama Suwanpakdee (2018) studied media exposure, attitude, behaviors, and media literacy of using hate speech via Facebook among 420 Thai teenagers aged 12-18 years old in Bangkok via Facebook and the relationship between these factors. From the hypothesis test, it showed that Thai teenagers of different genders, education background, and accompanying persons expressed exposed to similar hate speech content. In addition, the positive relationship between frequency of hate speech content exposure and attitude towards hate speech, including attitude towards hate-speech behaviors was found. Lastly, different genders were found to have no differences in media literacy on Facebook while education background and accompanying persons were found to have different media literacy.



### **2.6.2 Research related to Digital Citizenship**

Wood (2009) investigated how young people aged 14-16 years old defined and experienced active citizenship in their everyday life in real world settings by setting workshops and focus group interviews with 93 young people living in the East Midlands, England, to build an applied theory of active citizenship. It was found that young people defined active citizenship in terms of membership and status, social responsibility, and to a lesser extent, political literacy. Moreover, they specified rights, responsibilities, care for others, control, making decisions, and respect as the most important elements of active citizenship. These elements were explored in relation to their everyday experiences; however, they experienced active citizenship differently within and between each context of their lives (individual, community, and institutional levels) and expressed high degrees of related skills and awareness.

Jones and Mitchell (2015) found that the educational context focused more on digital citizenship education. The goals of digital citizenship were found to be broad and varied in different contexts. Besides, they measured the level of digital citizenship of 979 youths aged 11-17 years old in 2 aspects: 1) positive online behaviors, i.e. showing a respect to others, and 2) online participation as a citizen. The results showed that younger youths had less respectful online behaviors, but female ones paid more respect than males. Besides, it was found a positive relationship between online participation as citizen, and positive online behaviors. The study thus concluded that digital citizenship education was very important for a digital society.

UNESCO (2015) reported the results of a policy review that examined the national policies, initiative, and efforts of Member States in the Asia-Pacific region relating to the promotion of safe, effective, and responsible information, communication technology (ICT) environments, and ICT use by children. The study was conducted primarily by a survey research with representatives of Asia-Pacific Member States. These representatives were national experts or government officials who were officially nominated by their respective National Commissions for UNESCO. In particular, the review focused on national education policies relating to fostering digital citizenship in schools and among students, teachers, parents, and caregivers. This policy review was conducted as a part of UNESCO's "Fostering Digital Citizenship through Safe, Effective and Responsible Use of ICT" project."

The key findings of the policy review were that most of the policies relating to digital citizenship were digital security and privacy; however, 73% of the countries participating in the study still lacked a systematic control and a process of digital citizenship promotion. Apart of that, concerned organizations were recommended to pay attention to online opportunities and risks encountered by children as well as concurrently promoting digital literacy skills together with digital citizenship competencies.

International Society for Technology in Education (ISTE) (2016) studied the standardization of digital citizenship for students. The result revealed that to be a complete digital citizen, students should hold the following abilities; 1) an ability to cultivate and manage their digital identity and reputation and to be aware of the permanence of their actions in the digital world, 2) an ability to engage with positive, safe, legal, and ethical behaviors when using technology, including online interactions and communicating through networked devices, 3) an ability to demonstrate an understanding of and a respect for the rights and obligations of using and sharing intellectual property, and 4) an ability to manage their personal data to maintain digital privacy and security and to be aware of data-collection technology used to track their navigation online.

Choi (2016) developed a theory-based digital citizenship scale built from standardized and inclusive components of digital citizenship. The study included a multi-step scale development, designed to measure young adults' perception and behaviors with regard to digital citizenship. According to Choi, digital citizenship, equipped with desirable abilities, thinking patterns, and action on internet use allowed people to understand, navigate, engage in, and transform their self, community, society, and the world. From the findings, "Technical Skills and Local/Global Awareness" were found the most applicable while Networking Agency, Internet Political Activism, and Critical Perspectives were still much less applicable among students. Digital citizenship education was recommended to be fostered in schools by applying the finding of the research as a basic framework of the curriculum.

Chawaporn Dhamanityakul and Nudee Nupairoj (2018), studied and created competencies of Media, Information, and Digital Literacy (MIDL) for democratic citizens of secondary-school students. The results showed that the young people's

emotional and behavioral development was found to be related with their media behaviors. Regarding their mental and physical development, the students accessed to internet for their self-entertaining purpose, but frequently they exposed to inappropriate content. Due to their inexperience in life, students easily faced online risks when accessing to the internet. The reasons for online access were to update trends, to respond to their curiosity, and to follow their friends' activities. Training them to have skills relating to their use and purpose was thus perceived as necessary for MIDL cultivation. These skills were inhibition, emotional reaction to inappropriate content, etc. Moreover, in developing competencies of MIDL for democratic citizens, it was suggested that critical decision-making and positive participation as citizens should be taught for students.

From the aforementioned literature review, at both international and local context, internet offers opportunities as much as risks to digital natives. Though the youth are able to use digital devices fluently, they are still inexperienced in lives. Accordingly, a lack of critical thinking might be obstacle for them to deal with more complicating purpose of use and with more complex world as a citizen, a participant, and a change agent of a society. Thus, fostering digital citizenship is vital since it can enhance digital natives' resilience in living in this fast-changing digital society.

## **CHAPTER 3**

### **RESEARCH METHODOLOGY**

This study, “Conceptualizing Digital Citizenship for Digital Natives in Thailand,” was conducted by mixed methods, both quantitative and qualitative. The content in this chapter is 1) the research methodology of this study, 2) the sample selection, 3) the research procedure used in designing the instrument and collecting the data, and 4) presentation of the statistical methods used to analyze the data.

#### **3.1 Quantitative Method**

##### **3.1.1 Population**

To understand Digital Natives’ digital behaviors and to measure the level of their Digital Citizenship, the population of this study were Thai Digital Natives, born in 1989-1998, with five-year or more experience of internet use. According to Information and Communication Technology Survey in Household (2014) by National Statistics Office, most digital natives were young people, especially those Digital Natives, who were found to use internet the most (69.7%).

According to the Department of Provincial Administration, the total numbers of Thai young people, born in 1989-1998, or so-called Digital Natives (only people of Thai nationality) in Bangkok in December 2013 was 9,426,862, and were classified by age as illustrated in Table 3.1

**Table 3.1** 2013 Population of Young People, Born in 1989-1998, in Thailand

Age	Number of Population		
	Male	Female	Total
15	430,241	407,131	837,372
16	458,552	436,586	895,138
17	496,694	472,497	969,191
18	506,994	482,452	989,446
19	500,056	478,424	978,480
20	484,248	461,860	946,108
21	476,748	466,789	943,537
22	489,845	474,770	964,615
23	484,687	471,927	956,614
24	479,168	467,193	946,361
<b>Total</b>	<b>4,807,333</b>	<b>4,619,629</b>	<b>9,426,962</b>

**Source:** Department of Provincial Administration, 2013.

### 3.1.2 Sample and Sample Size

However, besides the criteria of year of birth, according to Measuring the Information Society (ITU, 2013), Digital Natives must have 5-year or more experience of internet use, but the above numbers of the population could not access the length of internet-use experience. Besides, from documentary research, no figures of Thai digital natives were presented in any previous studies. Therefore, to obtain a more reliable sample size of no specific numbers of the population, the following formula was used to calculate the size of the unknown population (Pachanee Cheyjunya, 2015),

$$n = \frac{p(1-p) z^2}{e^2}$$

when

- n = sample size
- p = estimated proportion of the population that presents the characteristic
- z = level of confidence according to the standard normal distribution
- e = margin of error (e = .05)

Thus for this study, the above formula was used to calculate the size of the required sample as follow:

$$\begin{aligned}
 p &= 0.50 \\
 z &= 1.96 \text{ ( level of confidence at 95\% )} \\
 e &= 0.05 \text{ (margin of error 5\% or = 0.05)}
 \end{aligned}$$

Thus, the sample size was

$$\begin{aligned}
 n &= \frac{0.50(1-0.50)1.96^2}{0.05^2} \\
 n &= \frac{0.5(0.5)(3.84)}{0.0025} \\
 n &= \frac{. 0.96 .}{0.0025} \\
 &= 384
 \end{aligned}$$

From the above formula, the calculated sample size of the population was 384. However, to avoid the unexpected error, 400 respondents were specified as the sample size for this study.

### 3.1.3 Sampling Method

According to the qualification specified by ITU (2013), the following were criteria in selecting the respondents:

- 1) Inclusive Criteria

(1) Digital natives, born in 1989-1998, male, female and transgender

(2) Digital natives with five years or more of online experience

(3) Digital natives with internet access

(4) Digital native with the willing of the research participation

2) Exclusive Criteria

Digital native without literacy

There were two steps of sampling for this study. First, the researcher applied convenience sampling, which is a non-probability sampling technique, because of the convenient accessibility and proximity to the researcher, the samples were random sampling from the School and University Facebook Page, online community and Chat group on Line Application. Then, purposive sampling was conducted and only 400 samples with the required criteria were selected from online questionnaires.

#### **3.1.4 Research Instrument**

The research instrument of this study was online questionnaires consisting of close-ended and open-ended questions. The following topics were to correspond to three research objectives of the study: 1) Digital Natives' Digital Behaviors, 2) Digital Natives' level of Digital Citizenship, and 3) the relationship between Digital Natives' digital behaviors (in the dimension of their level of online expertise and the level of digital media use) and their level of Digital Citizenship.

In details, online questionnaires comprise the following:

1) Part 1: General Information of the Respondent

(1) Gender

(2) Age

(3) Occupation

(4) Level of Education

(5) Type of Educational System

(6) Income

2) Part 2: Digital Behaviors

(1) Online Time per Day

(2) Mode of Online Connection

- (3) Place of Internet Access
  - (4) Digital Device Use
  - (5) Level of Self-Perception on Online Expertise
  - (6) Level of Digital Media Use as a Citizen
- 3) Part 3: Level of Digital Citizenship
- (1) Digital Accessibility
  - (2) Digital Commerce
  - (3) Digital Communication
  - (4) Digital Literacy
  - (5) Digital Etiquette
  - (6) Digital Laws & Ethics
  - (7) Digital Rights & Responsibilities
  - (8) Digital Health & Wellness
  - (9) Digital Security (self-protection)

### **3.1.5 Hypothesis Testing**

To answer the research objective no. 3: to examine the relationship between Digital Natives' digital behaviors (in the dimension of the level of online expertise and the level of digital media use) and their level of Digital Citizenship.

The hypothesis of this study was as follow,

Ho1: Digital Natives' level of Digital Citizenship; Digital Access, Digital Commerce, Digital Communication, Digital Literacy, Digital Etiquette, Digital Laws & Ethics, Digital Rights & Responsibilities, Digital Health & Wellness, and Digital Security (self-protection) relates to their overall Digital Behavior (by the level of their self-perception on online expertise and the level of digital media use as a citizen).

Ho2: Digital Natives' Digital Behavior in the dimension of the level of online expertise relates to their level of Digital Citizenship.

Ho3: Digital Natives' digital behavior in the dimension of the level of digital media use as a citizen relates to their level of Digital Citizenship.



### 3.1.6 Reliability and Validity

In terms of the reliability of response, all respondents were provided with the same set of questions, while validity was established by statistical measure. Besides, a panel of experts, including the advisor and the committees were requested to respond to a survey instrument or the proposed questionnaire.

#### 1) Reliability

The reliability of the questionnaire was assessed by using Cronbach Alpha method. To ensure that the responses collected through the instrument were reliable and consistent. The pilot test was conducted by an online questionnaire with 30 Digital Natives who were not included in the actual data collection. The reliability value was calculated by using Cronbach's alpha to ensure whether there was internal consistency within the items. According to George and Mallery (2010), the value of Coefficient Cronbach's Alpha is as follows:

- ≥ 0.9= Excellent,
- ≥ 0.8= Good,
- ≥ 0.7= Acceptable,
- ≥ 0.6= Questionable,
- ≥ 0.5= Poor, and
- ≤ 0.5=Unacceptable.

Therefore, for the research questionnaire to be reliable, its value of Coefficient Cronbach's Alpha must be at least 0.70. From the pilot test, the value of Coefficient Cronbach's Alpha was 0.913 with the average range of each question of 0.912 -0.917, or values of higher than 0.70 (See details in Appendix C); thus, the questionnaire was highly reliable.

#### 2) Validity

The following steps were proceeded to test the validity of the questionnaire:

Step one: The questionnaire was presented to the thesis committee for any suggestion for improvement.

Step two: The questionnaire was corrected and adjusted under comments and recommendations given by the thesis committee.

Step three: After receiving feedback and recommendations from the thesis committee, the questionnaire was checked by three experts in the field of digital citizenship development. (See details in Appendix B). The Index of Item-Objective Congruence (IOC) was used to find the content validity by evaluating the items of the questionnaire, ranging from -1 to +1 with the following interpretation:

Congruent = + 1

Questionable = 0

Incongruent = -1

The items that had scores lower than 0.5 were revised. On the other hand, the items that had scores higher than or equal to 0.5 were reserved.

### **3.1.7 Data Analysis and Presentation**

The data were analyzed by SPSS computer program and presented in frequency distributions and descriptive statistics while the inferential analysis was used to test the hypothesis. All incomplete surveys were discarded from the analysis. All findings were presented with respect to research questions.

## **3.2 Qualitative Method**

### **3.2.1 Population and Sample**

#### 1) Population

The populations in this study were divided into 3 groups, classified by the objectives of the research and the data collection methods as follow:

(1) Thai Digital Natives' Digital Behavior and Digital Natives' level of Digital Citizenship

#### a) Documentary Analysis

Depth information on Digital Behavior and Digital Citizenship was obtained by data collection via online and offline resources (2004 - 2018).

#### b) Focus Group Interview

The target population were representatives of Thai Digital Natives (aged 15-24 years old with at least 5-year online experience) selected by quota sampling, classified by age.

(2) Digital Citizenship Situation in Thailand

a) Documentary Analysis

Depth information on Digital Context relating to Digital Citizenship was obtained by data collection via online and offline resources (2004 - 2018).

(3) Guidelines of Digital Citizenship Suitable for Thai Society

a) Documentary Analysis

Depth information on Digital Citizenship was obtained by data collection via online and offline resources (2004 - 2018).

b) In-depth Interview

After fulfilling the objectives of understanding Digital Natives' digital behavior as well as their level of digital citizenship, an in-depth interview was conducted with experts in the field of Digital Citizenship to achieve the concept of Digital Citizenship and its attributes suitable for Thai Digital Natives with a concern of digital ethics, rights, and responsibilities.

### **3.2.2 Research Sampling Method**

For focus group interview with Thai Digital Natives, purposive and quota sampling was conducted. The 18 samples of Thai Digital Natives were divided by age into three groups of 6 persons each. It is remarkable that unschooled and unemployed respondents were included as referent groups to understand Thai Digital Natives' Digital Behavior and Digital Natives' level of Digital Citizenship in the broader scope. The groups were divided as follow:

Group 1: aged 15-17 years old (students at the high-school level and unschooled youths)

Group 2: aged 18-21 years old (students at the university level)

Group 3: aged 22-24 years old (postgraduates, first-jobbers and unemployed youths)

For in-depth interviews, the experts and policy-makers in the field of Digital Media and Digital Citizenship were purposively interviewed to express their ideas towards the concept of Digital Citizenship suitable for Thai Digital Natives. The names of the interviewees were as follow:

- 1) Professor Sonia Livingstone  
Professor of Social Psychology  
Department of Media and Communications  
London School of Economics and Political Science,  
London, England
- 2) Assoc. Professor Kathleen Tyner  
Department of Radio-Television-Film  
The University of Texas at Austin  
Texas, USA
- 3) Colonel Settapong Malisuwan, Ph.D.  
Former Vice-Chairman  
The Office of National Broadcasting and Telecommunications

Commission

- 4) Miss Supinya Klangnarong  
Commissioner  
The Office of National Broadcasting and Telecommunications

Commission

- 5) Assistant Professor Athapol Anunthavorasakul
  - (1) Secretary and Committee of Master of Education Program in Teaching Social Studies, Faculty of Education, Chulalongkorn University
  - (2) Director of Thai Civic Education-TCE Center
- 6) Nonthasruang Kleebpung, Ph.D.
  - (1) Assistant Director of International Relations,  
National Institute for Child and Family Development, Mahidol

University

- (2) Media Studies Expertise
- 7) Nudee Nupairoj, Ph.D.
  - (1) Lecturer  
Communication Arts (International Program)  
College of Communication Arts, Rangsit University
  - (2) Committee of Digital International Media Literacy E-book

Project

- 8) Mr. Worawut Ounjai
  - (1) Chief Executive Officer COL Public Company Limited
  - (2) Digital Economy and E-Commerce Expertise
- 9) Dr. Thitipong Nandhabiwat
  - (1) Board of Commissioners, Chairman, Information and Communication Technology Governance Committee, Port Authority of Thailand
  - (2) Board of Directors  
Chairman, Strategic Information Technology Governance Sub-Committee, Thailand Post Co., Ltd.
  - (3) IT Advisor to the Commander, Immigration Bureau
  - (4) Associate Judge, The Central Intellectual Property and International Trade Court
- 10) Mr. Jirat Jaemsawang
  - (1) Consultant Panyapiwat Institute Of Management Demonstration School (Satit Pim)
  - (2) Government officials, former teacher, Department of Computer, Suankularb Wittayalai Nonthaburi School
  - (3) Princess Mahajakri Award 2017 Winner

### **3.2.3 Research Instrument**

The research instrument for the qualitative method in this study was a semi-structured interview guide with open-ended questions, which responded to the objectives of the study.

Examples of the questions for in-depth interviews and focus group interviews were

- 1) What is the situation of Digital Natives and Digital Citizenship in Thailand?
- 2) What is the appropriate concept of Digital Citizenship for Thai Digital Natives?
- 3) What are the suggestions towards the following Digital Citizenship attributes that are needed and necessary for Thai Digital Natives?
  - (1) Digital Access

- (2) Digital Commerce
- (3) Digital Communication
- (4) Digital Literacy
- (5) Digital Etiquette
- (6) Digital Laws & Ethics
- (7) Digital Rights & Responsibilities
- (8) Digital Health & Wellness
- (9) Digital Security [Self-Protection]

#### **3.2.4 Reliability**

Triangulation process: data, theory, and methodology, with persons involved was applied to ensure the reliability of the questions for the qualitative method of this study.

#### **3.2.5 Data Analysis and Presentation**

After the data were collected, the next step was to categorize the obtained data. The analysis of data from the focus group interviews was compared with that from in-depth interviews. This study used an open-coding system to analyze participants' narrative responses line-by-line, phrase-by-phrase, and word-by-word. The final analysis led to the development of a report presenting the interpretation of results, limitations, generalizations, and interpretation of the study from the point of view of respondents, interviewees, and the researcher herself. The findings were presented in descriptive statements with some quotes of the interviewees.

## **CHAPTER 4**

### **DIGITAL MEDIA USAGE BEHAVIORS AND DIGITAL CITIZENSHIP OF THAI DIGITAL NATIVES**

In the study “Conceptualizing Digital Citizenship for Digital Natives in Thailand,” survey questionnaires and focus group interview were conducted with Thai digital natives. The findings of the research were divided into three parts:

- 1) The results from the survey research on digital media usage behaviors and digital citizenship of digital natives in Thailand
- 2) The findings from a focus group interview on digital media usage behaviors and digital citizenship of digital natives in Thailand
- 3) The summary of digital media usage behaviors and digital citizenship of digital natives in Thailand

#### **4.1 The Findings from the Survey Research on Digital Media Usage Behaviors and Digital Citizenship of Digital Natives in Thailand**

From data collection on digital media usage behaviors and digital citizenship of digital natives in Thailand from 400 digital natives, the findings were analyzed and interpreted as follow:

- Part 1: Personal information of the respondents
- Part 2: Digital media usage behaviors of the respondents
- Part 3: Digital citizenship of the respondents
- Part 4: The relationship between digital media usage behaviors and digital citizenship

#### 4.1.1 Personal Information of the Respondents

From the analysis of personal information of the respondents, the following was found as illustrated in Table 4.1.

**Table 4.1** Frequency and Percentage of Personal Data of the Respondents

<b>Personal Data</b>	<b>Frequency (N= 400)</b>	<b>Percentage</b>
<b>Sex</b>		
Male	144	36.00
Female	241	60.25
Alternative sex	15	3.75
<b>Age (years)</b>		
8-22	210	52.50
22-19	98	24.50
24-23	92	23.00
<b>Occupation</b>		
Secondary School Students	211	52.75
Education Students-Higher	145	36.25
Government Officers	1	0.25
Private-company Workers	14	3.50
Entrepreneurs	28	7.00
Others	0	0.00
<b>Level of Education</b>		
Lower than early or lower secondary	2	0.50
Early/ lower secondary (Junior high school)	73	18.25
High/ upper secondary (senior high school) /high vocational certificate)	147	36.75
Vocational certificate	5	1.25
Undergraduate (Bachelor's degree)	165	41.25



**Table 4.1** (Continued)

<b>Personal Data</b>	<b>Frequency (N= 400)</b>	<b>Percentage</b>
Graduate (higher than bachelor's degree)	8	2.00
<b>Educational System</b>		
Formal education	335	83.75
Non-formal education	65	16.25
<b>Average Monthly Salary (Baht)</b>		
Lower than 5,000	151	37.75
5,000 – 10,000	154	38.50
15,000 – 10,001	40	10.00
20,000 – 15,001	37	9.25
Higher than 20,000	18	4.50

From Table 4.1, the demographic data of 400 respondents was found as follow:

Sex: 144 respondents were male (36.00%), 241 were female (60.25%), and 15 were alternative sex (3.75%)

Age: 210 respondents were 15-18 years old (52.50%), 98 respondents 19-22 (24.50%), and 92 respondents 23-24 (23.00%).

Occupation: Most respondents (211 respondents) were students at elementary and secondary students (52.75%), and the next (145 respondents) were higher-education students (36.25%)

Education level: Most respondents (165) were studying at the undergraduate degree (41.25%), 147 at upper secondary school or senior high school (36.75%), and 73 at lower secondary school or junior high school (18.25%) respectively.

Educational system: 335 respondents were studying in the formal education system (83.75%) and 65 in the nonformal education system (16.25%).

Average monthly salary: Most respondents (154 respondents) earned between 5,000-10,000 baht monthly (38.50%) and 151 earned lower than 5,000 baht monthly (37.75%) respectively.

#### 4.1.2 The Findings on Digital Media Usage Behaviors of the Respondents

From the analysis of digital media usage behaviors of the respondents, the findings were divided into two parts:

Part 1: Frequency and percentage of the respondents' digital media usage behaviors

Frequency and percentage of the respondents' digital media usage behaviors as illustrated in Table 4.2-4.4.

**Table 4.2** Frequency and Percentage of Digital Media Usage Behaviors

Digital Media Usage Behaviors	Frequency	Percentage
	<b>N= 400</b>	
<b>Total Length of Time Using Digital Media</b>		
Less than 1 hour	11	2.75
2 – 1hours	18	4.50
4 – 3hours	38	9.50
6 – 5 hours	158	39.50
8 - 7 hours	84	21.00
More than 8 hours	91	22.75
<b>Mode of the Internet Connection</b>		
Wi-Fi	114	28.50
3G	19	4.75
4G	267	66.75

From Table 4.2, most of the respondents (158) spent 5-6 hours using digital media (39.50%), and 91 respondents more than 8 hours (22.75%). Regarding the

mode of internet connection, most respondents (267) used 4G to connect to internet (66.75%) and 114 respondents used Wi-Fi (28.50%).

**Table 4.3** Frequency and Percentage of the Place where the Respondents used their Digital Media

<b>The Place where the Respondents used their Digital Media</b>	<b>Frequency</b>	<b>Percentage</b>
Residence	370	32.43
Schools/University/Offices	265	23.23
Game Shop	67	5.87
Internet Cafe	97	8.50
Residence of Friends/Acquaintance/ Cousins	145	12.71
Public IT Center/ Library	62	5.43
Outdoor via Portable Computer/Mobile Phone	135	11.83
<b>Total</b>	<b>1,141</b>	<b>100.00</b>

From Table 4.3, 370 respondents used digital media at their own residence (32.43), followed by at school/university/ working office (265 respondents or 23.23%)

**Table 4.4** Frequency and Percentage of the Digital Device the Respondents Used  
(No. 1-3)

<b>Digital Device Used</b>	<b>Frequency</b>	<b>Percentage</b>
<b>The First Rank</b>		
SmartPhone	328	82.00
Tablet	22	5.50
Notebook	8	2.00
Laptop	40	10.00
SmartTV	2	0.50
Others	0	0.00
<b>The Second Rank</b>		
SmartPhone	50	12.50
Tablet	98	24.50
Notebook	192	48.00
Laptop	44	11.00
SmartTV	14	3.50
Others	2	0.50
<b>The third rank</b>		
SmartPhone	14	3.50
Tablet	113	28.25
Notebook	113	28.25
Laptop	81	20.25
SmartTV	79	19.75
Others	0	0.00
<b>Total</b>	<b>400</b>	<b>100.00</b>

From Table 4.4, at the first rank 328 respondents used SmartPhone the most (82.00%), 192 respondents used notebook the most at the second rank (48.00%), and 113 respondents used tablet the most at the third rank (28.25%)

Part 2: Level of the respondent' digital media usage behaviors

Level of the respondents' digital media usage behaviors as illustrated in Table

4.5 The following means were used as criteria in interpreting the data.

Mean 4.51-5.00	Extremely Agree or Very High Level
Mean 3.51-4.50	Strongly Agree or High Level
Mean 2.51-3.50	Neutral or Moderately Agree or Moderate Level
Mean 1.51-2.50	Strongly Disagree or Low Level
Mean 1.00-1.50	Extremely Disagree or Very Low Level

**Table 4.5** Frequency, Percentage, Mean and Standard Deviation of the Level of Digital Media Usage Behaviors of the Respondents

Digital Media Usage Behavior	Level of Digital Media Usage Behaviors					$\bar{x}$	S.D.	Interpretation
	Very High	High	Moderate	Low	Very Low			
<b>1. Level of Expertise</b>						<b>3.91</b>	<b>0.92</b>	<b>Very High</b>
1.1 You can use digital devices (i.e. SmartPhone, computer, tablet, etc.) and technology (i.e. programs and applications) well.	144 (36.00)	181 (45.25)	66 (16.50)	5 (1.25)	4 (1.00)	4.09	0.82	Very High
1.2 You can search for information from digital media well	183 (45.75)	160 (40.00)	53 (13.25)	3 (0.75)	1 (0.25)	4.13	0.83	Very High
1.3 You can use the Search Engine well	119 (29.75)	161 (40.25)	107 (26.75)	13 (3.25)	0 (0.00)	4.00	0.85	Very High
1.4 Upon the receipt of online information, you can analyze and classify information well.	125 (31.25)	172 (43.00)	76 (19.00)	22 (5.50)	5 (1.25)	4.04	0.89	Very High
1.5 You can classify and verify the correct online information well	103 (25.75)	174 (43.50)	106 (26.50)	3 (0.75)	14 (3.50)	3.96	0.89	Very High
1.6 You often create or write the content by yourself via digital media	114 (28.50)	119 (29.75)	120 (30.00)	30 (7.50)	17 (4.25)	3.65	1.11	Very High

**Table 4.5** (Continued)

Digital Media Usage Behavior	Level of Digital Media Usage Behaviors					$\bar{x}$	S.D.	Interpretation
	Very High	High	Moderate	Low	Very Low			
1.7 You like to post your images, VDO clips, status, and others about yourself	93 (23.25)	122 (30.50)	112 (28.00)	38 (9.50)	35 (8.75)	3.53	1.11	Very High
1.8 You often share information appropriately	92 (23.00)	176 (44.00)	107 (26.75)	16 (4.00)	9 (2.25)	3.82	0.89	Very High
<b>2. Level of Online Participation as a Citizen</b>						<b>3.57</b>	<b>1.09</b>	<b>Very High</b>
2.1 You are confident that your images, VDO clips, and status are useful for viewers.	90 (22.50)	119 (29.75)	126 (31.50)	51 (12.75)	14 (3.50)	3.54	1.05	Very High
2.2 You often verify the information before sharing or posting it to others	119 (29.75)	167 (41.75)	87 (21.75)	26 (6.50)	1 (0.25)	3.92	0.89	Very High
2.3 In sharing information, images, or posting any statements, you will concern about ethics and social responsibility without damaging any	118 (29.50)	167 (41.75)	97 (24.25)	12 (3.00)	6 (1.50)	3.93	0.89	Very High

**Table 4.5** (Continued)

Digital Media Usage Behavior	Level of Digital Media Usage Behaviors					$\bar{x}$	S.D.	Interpretation
	Very High	High	Moderate	Low	Very Low			
reputation or ways of living.								
2.4 You often like to copy others' online statement without reference	79 (19.75)	100 (25.00)	99 (24.75)	70 (17.50)	52 (13.00)	3.09	1.32	Moderate
2.5 You will think of ethics and social responsibility in using proper words, language, and ways of expression.	116 (29.00)	164 (41.00)	92 (23.00)	15 (3.75)	13 (3.25)	3.89	0.95	Very High
2.6 Your use of digital devices aims to facilitate or help to solve problems of your studying or your working.	112 (28.00)	161 (40.25)	109 (27.25)	9 2.25	9 (2.25)	3.82	1.04	Very High
2.7 Your use of digital devices aims to facilitate your family problems, i.e. to use online information to solve family problems, or to use online suggestions to solve health problems for family members, etc.	114 (28.50)	155 (38.75)	99 (24.75)	19 (4.75)	13 (3.25)	3.79	1.05	Very High



**Table 4.5** (Continued)

Digital Media Usage Behavior	Level of Digital Media Usage Behaviors					$\bar{x}$	S.D.	Interpretation
	Very High	High	Moderate	Low	Very Low			
2.8 You often use online service for voting to support, oppose, or express your ideas as a member of the society for the benefits of the community, the nation, or the world.	64 (16.00)	87 (21.75)	118 (29.50)	91 (22.75)	40 (10.00)	3.17	1.28	Moderate
2.9 You create Page or websites for the benefits for your friends, your school, community, nation, and the world.	52 (13.00)	99 (24.75)	114 (28.50)	79 (19.75)	56 (14.00)	2.97	1.41	Moderate

From Table 4.5, the mean of digital media usage behaviors was between 2.97-4.13. When interpreting each dimension, it was found that the level of expertise in using digital media was at “very high” ( $\bar{x}$ =3.91). The statement with the highest mean was “You can search for information from digital media well” ( $\bar{x}$ = 4.13). The level of digital citizenship was at “very high” ( $\bar{x}$ =3.57). The statement with the highest mean was “In sharing information, images or posting statements, you will think about ethics and social responsibility without damaging the reputation or ways of living.” ( $\bar{x}$  = 3.93).

### Part 3: The Analysis of Digital Citizenship of the Respondents

The analysis of digital citizenship level of the respondents shown in Table 4.6 used the following criteria for interpreting the mean.

Mean 4.51-5.00	Strongly Agree/or Very High Level
Mean 3.51-4.50	Agree/ High Level
Mean 2.51-3.50	Neutral or Moderately Agree/Moderate Level
Mean 1.51-2.50	Disagree/Low Level
Mean 1.00-1.50	Strongly Disagree/Very Low Level

**Table 4.6** Frequency, Percentage, Mean and Standard Deviation of the Level of Digital Citizenship

Level of Digital Citizenship	Level of Digital Media Usage Behaviors					$\bar{x}$	S.D.	Interpretation
	Very High	High	Moderate	Low	Very Low			
<b>1. Digital Access</b>						<b>3.99</b>	<b>0.84</b>	<b>High</b>
1.1 You have a modern communication device	137 (34.25)	179 (44.75)	73 (18.25)	10 (2.50)	1 (0.25)	4.00	0.82	High
1.2 You think that you will have a chance to use modern technology	121 (30.25)	191 (47.75)	65 (16.25)	20 (5.00)	3 (0.75)	4.00	0.82	High
1.3 You can use internet service with wide coverage.	117 (29.25)	181 (45.25)	81 (20.25)	19 (4.75)	2 (0.50)	3.98	0.85	High
1.4 You think you are ready to move toward digital citizenship	122 (30.50)	167 (41.75)	85 (21.25)	25 (6.25)	1 (0.25)	3.97	0.88	High
<b>2. Digital Commerce/Online Purchase</b>						<b>3.64</b>	<b>0.98</b>	<b>High</b>
2.1 You think at present to purchase products online is normal for technology users.	151 (37.75)	162 (40.50)	73 (18.25)	11 (2.75)	3 (0.75)	4.07	0.90	High
2.2 You think a product online purchase is safe.	65 (16.25)	95 (23.75)	186 (46.50)	44 (11.00)	10 (2.50)	3.51	0.94	High

**Table 4.6** (Continued)

Level of Digital Citizenship	Level of Digital Media Usage Behaviors					$\bar{x}$	S.D.	Interpretation
	Very High	High	Moderate	Low	Very Low			
2.3 You think both sellers and buyers understand rules and laws of online transactions well.	69 (17.25)	100 (25.00)	177 (44.25)	43 (10.75)	11 (2.75)	3.48	0.95	Moderate
2.4 You like online transactions	83 (20.75)	114 (28.50)	107 (26.75)	53 (13.25)	43 (10.75)	3.50	1.11	Moderate
<b>3. Digital Communication/ Information Exchange Via Digital Media</b>						<b>3.80</b>	<b>0.98</b>	<b>High</b>
3.1 You think at present there has been a variety of communication choices i.e. emails, mobile phones, etc.	175 (43.75)	141 (35.25)	69 (17.25)	11 (2.75)	4 (1.00)	4.10	0.80	High
3.2 When you want to communicate with others, you prefer using digital media, i.e. Facebook, Line, etc. as the first priority.	185 (46.25)	142 (35.50)	59 (14.75)	11 (2.75)	3 (0.75)	4.12	0.86	High

**Table 4.6** (Continued)

Level of Digital Citizenship	Level of Digital Media Usage Behaviors					$\bar{x}$	S.D.	Interpretation
	Very High	High	Moderate	Low	Very Low			
3.3 You think you can choose to use digital media appropriately for time and places.	127 (31.75)	167 (41.75)	84 (21.00)	19 (4.75)	3 (0.75)	3.93	0.85	High
3.4 You feel happy to share information, images via digital media for others to see.	87 (21.75)	155 (38.75)	114 (28.50)	34 (8.50)	10 (2.50)	3.76	0.94	High
3.5 You know digital media have both good and bad points.	152 (38.00)	152 (38.00)	75 (18.75)	13 (3.25)	8 (2.00)	4.03	0.92	High
3.6 You like to find new friends and talk to strangers on digital media.	62 (15.50)	111 (27.75)	90 (22.50)	73 (18.25)	64 (16.00)	3.38	1.26	Moderate
3.7 You can present your real self on digital media.	78 (19.50)	183 (45.75)	98 (24.50)	28 (7.00)	13 (3.25)	3.63	1.03	High
3.8 When you do any activity, you often share it or post information for others to acknowledge.	78 (19.50)	123 (30.75)	106 (26.50)	68 (17.00)	25 (6.25)	3.42	1.18	Moderate

**Table 4.6** (Continued)

Level of Digital Citizenship	Level of Digital Media Usage Behaviors					$\bar{x}$	S.D.	Interpretation
	Very High	High	Moderate	Low	Very Low			
<b>4. Digital Literacy</b>						<b>3.71</b>	<b>0.87</b>	<b>High</b>
4.1 You can select to choose digital devices and programs adroitly	73 (18.25)	188 (47.00)	117 (29.25)	19 (4.75)	3 (0.75)	3.79	0.85	High
4.2 You can always use certain devices to share information properly.	82 (20.50)	170 (42.50)	110 (27.50)	33 (8.25)	5 (1.25)	3.77	0.91	High
4.3 You can understand information from digital media well.	72 (18.00)	185 (46.25)	117 (29.25)	26 (6.50)	0 (0.00)	3.81	0.82	High
4.4 You can analyze the use of online information well.	87 (21.75)	204 (51.00)	89 (22.25)	19 (4.75)	1 (0.25)	3.84	0.80	High
4.5 You can analyze the credibility of online information well.	77 (19.25)	195 (48.75)	106 (26.50)	21 (5.25)	1 (0.25)	3.79	0.80	High
4.6 You can distinguish online information between opinions and facts.	80 (20.00)	194 (48.50)	103 (25.75)	21 (5.25)	2 (0.50)	3.8 0	0.8 1	High

**Table 4.6** (Continued)

Level of Digital Citizenship	Level of Digital Media Usage Behaviors					$\bar{x}$	S.D.	Interpretation
	Very High	High	Moderate	Low	Very Low			
4.7 You can evaluate the impact possibly caused by online information.	80 (20.00)	174 (43.50)	112 (28.00)	31 (7.75)	3 (0.75)	3.72	0.87	High
4.8 You are confident when posting images, VDO clips, status, or anything about yourself.	65 (16.25)	157 (39.25)	115 (28.75)	41 (10.25)	22 (5.50)	3.52	1.00	High
4.9 You use your own creativity in modifying statements, images, and VDO clips of yourself.	68 (17.00)	164 (41.00)	126 (31.50)	16 (4.00)	26 (6.50)	3.63	0.98	High
4.10 You always know what you want from posting images, status, or anything about yourself.	53 (13.25)	171 (42.75)	146 (36.50)	19 (4.75)	11 (2.75)	3.67	0.87	High
4.11 You always realize that your images, VDO clips, and status will be beneficial for viewers.	55 (13.75)	137 (34.25)	167 (41.75)	15 (3.75)	26 (6.50)	3.52	0.99	High

**Table 4.6** (Continued)

Level of Digital Citizenship	Level of Digital Media Usage Behaviors					$\bar{x}$	S.D.	Interpretation
	Very High	High	Moderate	Low	Very Low			
4.12 You know how to use technologies (study information, use applications for editing) to help create your status, images, and VDO clips.	43 (10.75)	166 (41.50)	159 (39.75)	28 (7.00)	4 (1.00)	3.59	0.83	High
4.13 In expressing your ideas online, you will always think of ethics and social responsibility for not causing any effect on others' reputation or their ways of living.	76 (19.00)	199 (49.75)	95 (23.75)	26 (6.50)	4 (1.00)	3.80	0.84	High
<b>5. Digital Etiquette</b>						<b>3.68</b>	<b>0.92</b>	<b>High</b>
5.1 You often enter creative and useful websites.	82 (20.50)	190 (47.50)	105 (26.25)	17 (4.25)	6 (1.50)	3.77	0.88	High
5.2 You often write your online statements or content with polite language.	58 (14.50)	208 (52.00)	111 (27.75)	22 (5.50)	1 (0.25)	3.74	0.81	High



**Table 4.6** (Continued)

Level of Digital Citizenship	Level of Digital Media Usage Behaviors					$\bar{x}$	S.D.	Interpretation
	Very High	High	Moderate	Low	Very Low			
5.3 You think that you have a good manner in using digital or online media.	69 (17.25)	200 (50.00)	110 (27.50)	19 (4.75)	2 (0.50)	3.80	0.84	High
5.4 You think that you use communication devices at the right place and right time.	61 (15.25)	197 (49.25)	105 (26.25)	23 (5.75)	14 (3.50)	3.67	0.96	High
5.5 You often use communication devices in the classroom or in a meeting.	61 (15.25)	132 (33.00)	134 (33.50)	30 (7.50)	43 (10.75)	3.42	1.10	Moderate
<b>6. Digital Laws and Ethics</b>						<b>3.52</b>	<b>1.04</b>	<b>High</b>
6.1 You think that to download free songs and movies on the internet is illegal.	58 (14.50)	120 (30.00)	155 (38.75)	39 (9.75)	28 (7.00)	3.48	1.04	Moderate
6.2 You think that to use others' ID or to disguise yourself as others is illegal.	157 (39.25)	112 (28.00)	95 (23.75)	19 (4.75)	17 (4.25)	3.8 8	1.0 2	High

**Table 4.6** (Continued)

Level of Digital Citizenship	Level of Digital Media Usage Behaviors					$\bar{x}$	S.D.	Interpretation
	Very High	High	Moderate	Low	Very Low			
6.3 You think that to publicize images/ statements without reference is common and is not wrong.	68 (17.00)	116 (29.00)	134 (33.50)	43 (10.75)	39 (9.75)	3.25	1.11	Moderate
6.4 You think a Hacker is a competent person in spite of his or her illegal action.	147 (36.75)	122 (30.50)	92 (23.00)	26 (6.50)	13 (3.25)	3.65	1.03	High
6.5 You think you have good knowledge about digital laws.	86 (21.50)	120 (30.00)	125 (31.25)	53 (13.25)	16 (4.00)	3.33	1.02	Moderate
<b>7. Digital Rights and Responsibilities</b>						<b>3.69</b>	<b>0.92</b>	<b>High</b>
7.1 Every person has freedom in doing anything on the internet.	83 (20.75)	179 (44.75)	101 (25.25)	27 (6.75)	10 (2.50)	3.65	0.99	High
7.2 When you are displeased with something, you always post it on online media.	68 (17.00)	146 (36.50)	113 (28.25)	32 (8.00)	41 (10.25)	3.40	1.14	Moderate

**Table 4.6** (Continued)

Level of Digital Citizenship	Level of Digital Media Usage Behaviors					$\bar{x}$	S.D.	Interpretation
	Very High	High	Moderate	Low	Very Low			
7.3 You always respect others' rights of privacy on the internet.	80 (20.00)	194 (48.50)	107 (26.75)	16 (4.00)	3 (0.75)	3.77	0.81	High
7.4 You think that Digital users should have a social responsibility.	92 (23.00)	184 (46.00)	95 (23.75)	19 (4.75)	10 (2.50)	3.74	0.88	High
7.5 You think that digital users should respect their own and others' rights.	99 (24.75)	198 (49.50)	87 (21.75)	14 (3.50)	2 (0.50)	3.86	0.82	High
7.6 In expressing your ideas on internet, you will think of ethics and social responsibilities by selecting proper words, language, and ways of expression.	63 (15.75)	190 (47.50)	114 (28.50)	28 (7.00)	5 (1.25)	3.71	0.87	High
<b>8. Digital Health and Wellness</b>						<b>3.70</b>	<b>0.94</b>	<b>High</b>
8.1 You think too long use of mobile phones, tablets, or computer affects eye safety.	132 (33.00)	133 (33.25)	99 (24.75)	24 (6.00)	12 (3.00)	3.83	0.97	High

**Table 4.6** (Continued)

Level of Digital Citizenship	Level of Digital Media Usage Behaviors					$\bar{x}$	S.D.	Interpretation
	Very High	High	Moderate	Low	Very Low			
8.2 You think too long use of digital media affects both physical and mental health.	103 (25.75)	158 (39.50)	111 (27.75)	23 (5.75)	5 (1.25)	3.87	0.88	High
8.3 You think you can limit your time of using digital media properly.	101 (25.25)	151 (37.75)	115 (28.75)	21 (5.25)	12 (3.00)	3.57	0.99	High
8.4 You have ways of taking care of your health from too long use of digital media.	64 (16.00)	126 (31.50)	163 (40.75)	41 (10.25)	6 (1.50)	3.53	0.93	High
<b>9. Digital Security (Self-Protection)</b>						<b>3.65</b>	<b>0.96</b>	<b>High</b>
9.1 You install an anti-virus program to protect your digital devices or equipment.	77 (19.25)	150 (37.50)	121 (30.25)	44 (11.00)	8 (2.00)	3.69	0.93	High
9.2 You often scan virus and save your data.	68 (17.00)	148 (37.00)	126 (31.50)	51 (12.75)	7 (1.75)	3.61	0.92	High
9.3 You know how to protect from virus	64 (16.00)	144 (36.00)	144 (36.00)	40 (10.00)	8 (2.00)	3.55	0.97	High

**Table 4.6** (Continued)

Level of Digital Citizenship	Level of Digital Media Usage Behaviors					$\bar{x}$	S.D.	Interpretation
	Very High	High	Moderate	Low	Very Low			
9.4 You do not reveal your personal data on online media.	65 (16.25)	153 (38.25)	132 (33.00)	39 (9.75)	11 (2.75)	3.54	0.98	High
9.5 You have your username and password in entering the computerized or communication system.	173 (43.25)	170 (42.50)	43 (10.75)	10 (2.50)	4 (1.00)	4.06	0.90	High
9.6 You always change your password.	88 (22.00)	126 (31.50)	91 (22.75)	76 (19.00)	19 (4.75)	3.45	1.08	Moderate
<b>Total</b>						<b>3.71</b>	<b>0.94</b>	<b>High</b>

From Table 4.6, it was found that the overall digital citizenship of the respondents was at “high” level ( $\bar{x} = 3.71$ ). When analyzing each issue, it was found that digital access was at the “high” level ( $\bar{x} = 3.99$ ). The issues with the highest mean were “you have modern communication devices” and “you think that you have a chance to use modern technologies” ( $\bar{x} = 4.00$ ).

Digital purchase was at “high” level” ( $\bar{x} = 4.00$ ). The issues with the highest mean were “you think that at present online purchase is common for technology users” ( $\bar{x} = 4.07$ ).

Digital communication was at “high” level” ( $\bar{x} = 3.80$ ). The issue with the highest mean was “when you want to communicate with others, you often use digital media, i.e. Facebook, Line as your first priority” ( $\bar{x} = 4.12$ ).

Digital literacy was at “high” level” ( $\bar{x} = 3.71$ ). The issue with the highest mean was “you can analyze the use of online information well” ( $\bar{x} = 3.84$ ).

Digital etiquette was at “high” level” ( $\bar{x} = 3.68$ ). The issue with the highest mean was “you think that you have a good manner in using digital or online media” ( $\bar{x} = 3.80$ ).

Digital Laws and Ethics were at “high” level” ( $\bar{x} = 3.52$ ). The issue with the highest mean was “you think that to use others’ ID or to disguise yourself as others are illegal” ( $\bar{x} = 3.88$ ).

Digital rights and responsibilities was at “high” level” ( $\bar{x} = 3.69$ ). The issue with the highest mean was “you think that technology users should respect their own and others’ right” ( $\bar{x} = 3.86$ ).

Digital health and wellness were at “high” level” ( $\bar{x} = 3.70$ ). The issue with the highest mean was “you think that too long use of digital or online media affects both physical and mental health” ( $\bar{x} = 3.87$ ).

Digital Security (self-protection) was at “high” level” ( $\bar{x} = 3.65$ ). The issue with the highest mean was “you have username and password to enter the computerized or communication devices” ( $\bar{x} = 4.06$ ).

#### Part 4: An Analysis of the Relationship between Digital Media Usage Behaviors and Digital Citizenship

From the research hypothesis that there is a relationship between “digital citizenship: digital access, digital commerce, digital communication, digital literacy,

digital etiquette, digital laws and ethics, digital rights and responsibilities, digital health and wellness, and digital security, and digital media usage behaviors, it was found that such a hypothesis was confirmed as shown in Table 7-10. The criteria used to interpret the level of correlation based on the concept of Rumsey (2011) was as follow:

r (correlation coefficient)	0.70 and Higher	High (Strong)
	$\pm 0.50 - \pm 0.69$	Moderate
	$\pm 0.30 - \pm 0.49$	Low (Weak)
	Lower than 0.30	Very Low (Very Weak)

**Table 4.7** The Analysis of the Relationship between Digital Media Usage Behaviors and Digital Citizenship

Digital Citizenship	Digital Media Usage Behaviors		
	Pearson Correlation (r)	Sig.	Level of Relationship
Digital Access	0.47**	0.000	Low
Digital Commerce	0.58**	0.000	Moderate
Digital Communication	0.60**	0.000	Moderate
Digital Literacy	0.67**	0.000	Moderate
Digital Etiquette	0.53**	0.000	Moderate
Digital Laws and Ethics	0.46**	0.000	Low
Digital Rights and Responsibilities	0.38**	0.000	Low
Digital Health and Wellness	0.31**	0.000	Low
Digital Security (Self-Protection)	0.35**	0.000	Low
<b>Total</b>	<b>0.67**</b>	<b>0.000</b>	<b>Moderate</b>

**Note:** \*\* at the statistical significance level of 0.01

From Table 4.7, the relationship between digital media usage behaviors and digital citizenship was found at a moderate level ( $r = 0.67$ ) at the significance level of 0.01, which confirmed the hypothesis.

From analyzing each aspect of digital citizenship, it was found that digital commerce, digital communication, digital literacy, and digital etiquette had a correlation with digital media usage behaviors at the significance level of 0.01, which confirmed the hypothesis. Besides, digital access, digital laws and ethics, digital rights and responsibilities, digital health and wellness, and digital security have a low correlation with digital media usage behaviors at the significance level of 0.01.

**Table 4.8** An Analysis of the Relationship between Digital Media Usage Behavior in the Dimension of Digital Expertise and Digital Citizenship

Digital Citizenship	Digital Media Usage Behavior in the Dimension of Digital Expertise		
	Pearson Correlation (r)	Sig.	Level of Relationship
1. Digital Access	0.53**	0.000	Moderate
2. Digital Commerce	0.53**	0.000	Moderate
3. Digital Communication	0.60**	0.000	Moderate
4. Digital Literacy	0.65**	0.000	Moderate
5. Digital Etiquette	0.53**	0.000	Moderate
6. Digital Laws and Ethics	0.42**	0.000	Low
7. Digital Rights and Responsibilities	0.37**	0.000	Low
8. Digital Health and Wellness	0.32**	0.000	Low
9. Digital Security (Self-Protection)	0.33**	0.000	Low
<b>Total</b>	<b>0.66**</b>	<b>0.000</b>	<b>Moderate</b>

**Note:** \*\* at the statistical significance level of 0.01



From Table 4.8, digital media usage behaviors in the dimension of online expertise were found to have a moderate correlation with digital citizenship ( $r = 0.66$ ) at the significance level of 0.01, which confirmed the hypothesis.

From analyzing each aspect of digital citizenship, it was found that digital access, digital commerce, digital communication, digital literacy, and digital etiquette had a moderate correlation with digital media usage behaviors at the significance level of 0.01, which confirmed the hypothesis. Besides, digital laws and ethics, digital rights and responsibilities, digital health and wellness, and digital security had a low correlation with digital media usage behaviors at the significance level of 0.01.

**Table 4.9** An Analysis of the Relationship between Online Participation as a Citizen and Digital Citizenship

Digital Citizenship	Online Participation as a Citizen		
	Pearson Correlation (r)	Sig.	Level of Relationship
1. Digital Access	0.38**	0.000	Low
2. Digital Commerce	0.55**	0.000	Moderate
3. Digital Communication	0.54**	0.000	Moderate
4. Digital Literacy	0.61**	0.000	Moderate
5. Digital Etiquette	0.47**	0.000	Low
6. Digital Laws and Ethics	0.44**	0.000	Low
7. Digital Rights and Responsibilities	0.35**	0.000	Low
8. Digital Health and Wellness	0.28**	0.000	Very Low
9. Digital Security (Self-Protection)	0.33**	0.000	Low
<b>Total</b>	<b>0.61**</b>	<b>0.000</b>	<b>Moderate</b>

**Note:** \*\* at the statistical significance level of 0.01

From Table 4.9, digital media usage behaviors in the dimension of online participation as a citizen had a moderate correlation with digital citizenship ( $r = 0.61$ ) with the significance level of 0.01, which confirmed the hypothesis.

From analyzing each aspect of digital citizenship, it was found that digital commerce, digital communication, and digital literacy had a moderate correlation with digital media usage behaviors at the significance level of 0.01, which confirmed the hypothesis. Besides, digital access, digital etiquette, digital laws and ethics, digital rights and responsibilities, digital health and wellness, and digital security had a low correlation with digital media usage behaviors at the significance level of 0.01.

**Table 4.10** The Ranking of the Relationship between Digital Media Usage Behaviors and Digital Citizenship

Digital Citizenship	Digital Media Usage Behaviors		
	Pearson Correlation (r)	Level of Relationship	Ranking
1. Digital literacy	0.67	Moderate	1
2. Digital communication	0.60	Moderate	2
3. Digital commerce	0.58	Moderate	3
4. Digital etiquette	0.53	Moderate	4
5. Digital access	0.47	Low	5
6. Digital laws and ethics	0.46	Low	6
7. Digital rights and responsibilities	0.38	Low	7
8. Digital security (self-protection)	0.35	Low	8
9. Digital health and wellness	0.31	Low	9

Table 4.10 illustrates the ranking of the relationship between digital media usage behaviors and digital citizenship. Digital literacy was ranked as the first at the moderate level of correlation, the same as digital communication, digital commerce,

and digital etiquette, the second, third, and fourth rank accordingly. For other aspects of digital citizenship: digital access, digital etiquette, digital laws and ethics, digital rights and responsibilities, digital health and wellness, and digital security, the correlation was at a low level.

## **4.2 The Findings from Focus Group Interview on Online Behaviors and Digital Citizenship of Digital Natives in Thailand**

To obtain more various and complete information useful for the building of a conceptual framework for appropriate digital citizenship in Thai society, three groups of focus group interview were conducted with representatives of the following: the representatives of students in the formal education system and non-formal education system, divided by level of education and age. Purposive sampling was conducted with the following samples: 1) 6 students of late or higher secondary school, aged 15-18 years old, 6 students of undergraduate level, aged 19-22 years old, and 6 first-jobbers, aged 23-24 years old. The findings from focus group interviews were as follow:

### **4.2.1 Digital Media Usage Behaviors**

The findings from this topic useful for building a conceptual framework for appropriate digital citizenship in Thai society were as follow: the usage of digital equipment and application, online expertise, and the usage of digital media for digital citizenship. The details of the findings were as follow:

1) The Usage of Digital Equipment and Application (1) How to use digital media (2) Platform used and (3) Factors affecting the usage of media on each platform

#### **(1) How to Use Digital Media**

From the focus group interviews with digital native representatives of all three ranges of age, it was found that most of them used digital media on multiplatform by searching or exposing to information from websites, posting, sharing, and following on Facebook, Twitter, and Instagram, viewing video clips from

YouTube, calling or chatting on Line, and transmission of information relating to the studying or online transaction through email.

I think in the websites, there is a lot of information, i.e. research, books, etc. It is easy to search and we don't have to go to search in a library. We can search for anything by Search Engine of Google. When we type just a few words, a lot of data will be shown up. (Undergraduate student aged 19-22 years old)

Once I'm in the classroom, I automatically use my phone. No matter how strict my teachers are, I always take a glance to look at Facebook, Instagram, Twitter every minute and keep scrolling for reading. (Undergraduate student aged 19-22 years old)

For my friends around me, the way they use online media the most is to upload their photos or to share current or top hit topics on Facebook. (First jobber aged 23-24 years old)

On Facebook, I will post and share but when I make a call, I will use Line because it's free. (First-jobber aged 23-24 years old)

Mostly, I use Twitter. I watch Korean series on YouTube and look at Korean artists on Instagram. (Late secondary student aged 15-18 years old)

YouTube is for viewing VDO clips. I use group line for calling in a group. Sometimes, we have a discussion on assignments or we use for tutoring. Sometimes, 400 texts on exam tutoring were shown up. (Late secondary student aged 15-18 years old)

I use emails and line. Mostly, I use emails for submitting my assignment. (First-jobber aged 23-24 years old)

I use online media in education. Now, the university gave us an iPad for some subjects so we learn with an iPad to replace books or paper to help conserve natural resources. ...yes, it looks simpler and more modern. (Undergraduate student aged 19-22 years old)

When I go to JJ market or Jatujak, I don't need to have money with me but just a telephone. It helps to decrease crimes also. We don't have to carry a money bag or purse. If I want to buy clothes, I just scan and scan. Then, I can get my clothes. If a thief wants to steal them, come on. He will get only clothes. (First-jobber aged 23-24 years old)

## (2) Platform Used

From focus group interviews, it was found that the samples use online networks regularly and the most popular platforms were Twitter, Facebook, and YouTube.

I use all apps but during this time I use Twitter the most. If I want to view a text, I will use Twitter as it combines a lot of functions or it has much more functions than Facebook and we can get a message faster sometimes. (Late secondary student aged 15-18 years old)

I use Twitter, Facebook, and YouTube, but I'm more addicted to Twitter. (Late secondary student aged 15-18 years old)

Most of my friends use Twitter, Instagram, and YouTube (Late secondary student aged 15-18 years old)

I use Twitter mostly and sometimes Facebook or view general webs. (Undergraduate student aged 19-22 years old)

I use almost all of them but mostly I use Facebook for reading news and viewing Fan page on Facebook. (Undergraduate student aged 19-22 years old)

Like Facebook, I have to enter every day. For Twitter, I will see which hashtags are top hit. (First-jobber aged 23-24 years old)

(3) Factors affecting the usage of media on each platform

From focus group interviews, it was found that the factors affecting the usage of media on each platform were the following:

a) Update, rapidity, and multi-content It should be a platform presenting updated and rapid information with a diversity of content.

The first thing I will look for is to update what I miss in the past 6-7 hours while sleeping. Sometimes, I want to read the news of the day. To know it from TV, it is too late. Sometimes, I want to follow up some news from reliable webs for a comparison. (Undergraduate student aged 19-22 years old)

Facebook and Twitter because of hashtags. For this generation, they like to hashtag. When they post or share, they also type hashtags. (Undergraduate student aged 19-22 years old)

b) Credibility It must be a platform with identifiable and reliable sources, which could be used as references for easy comparison, i.e. formal websites of a news agency or of governmental organization, etc.

Before we will read or consume any news from any media, we must look for the facts so it is necessary that we have to expose to several media that look credible and find out if it is true or not before sharing to others; otherwise, we may lose face. (First-jobber aged 23-24 years old)

c) Attention and Interest It had to be a platform from which ones could select to search for any information they needed or they could set up for a specific use to respond to their interest i.e. websites, social networking sites, etc.

Like Twitter, I want to see in which people are interested now or which hashtag is on the top list. Also, I want to know the meaning of each hashtag and where it comes from. (First-jobber aged 23-24 years old)

Now our life is always in a hurry. Therefore, if we are interested in anything, we can post it right away specifically. (First-jobber aged 23-24 years old).

d) Interactivity and participation The platform had to provide a space for interaction or participation in some ways, i.e. comments, exchange of ideas, suggestions, word-of-mouth, shares, likes, posts, etc.

I'm a fan club of Korean artists. Mostly, their fan clubs will tweet. Sometimes, I found some foreign fan clubs, I interacted with them too. It makes our world larger without ethnicity restrictions. (Late secondary student aged 15-18 years old)

I read news from Twitter and then share it. The latest news is about Pop (Late secondary student aged 15-18 years old)

From the aforementioned findings, it indicates that the samples prefer using digital media on multiplatform and used Twitter, Facebook, and YouTube regularly. The factors affect their use of platforms are a) update, rapidity, and multi-content, b) credibility, c) attention and interest, and d) interactivity and participation.

## 2) The Use of Content

From focus group interviews, it was found that the samples used the content of digital media diversely. Their content use could be classified into the following: 1) information inquiry 2) information follow-up 3) content presentation and 4) content use for specific purposes

### (1) Information Acquire or Search

The samples searched information in their daily life to know what really happened in the society and to search for specific topics to expand their knowledge and enhance their entertainment and relaxation

Before we will read or consume any news from any media, we must look for the facts so it is necessary that we have to expose to several media that look credible and find out if it is true or not before sharing to others; otherwise, we may lose face. (First-jobber aged 23-24 years old)

I like to search for tourism information to see which place is beautiful and where I want to take a photo. I don't like doing things in a routine way but like to go to a different or new place and try new things. Also, I want to get a lot of economic information as well (Undergraduate student aged 19-22 years old)

I use it for searching for information or something, such as my learning materials, my assignment, etc. (Late secondary student aged 15-18 years old)

I open google to search for news for my assignment and for the stories I like. (Undergraduate student aged 19-22 years old)

## (2) Information Follow-up

The samples followed the information that they liked or in which they were interested, i.e. sports, food, artists, actors, etc., including following news that was in the current trends in the society so that they could use as a topic for a conversation, word-of-mouth, or for an adaption in their daily life.

I will follow what I'm interested in first, i.e. games, sports, tourism, etc. Sometimes, I follow some sharp quotes from the movies or to find where this sharp quote comes from. (Undergraduate student aged 19-22 years old)

YouTube for watching Korean series and Instagram for viewing Korean artist. Most woman will view it this way. (Late secondary student aged 15-18 years old)



I follow food programs to see recommended food or menu (everybody laughed). If I watch it at night, it can make me hungry. I like to see people eat. Before going to bed, it makes food look delicious. It's like a live program to see people eat. (First-jobber aged 23-24 years old)

I like to use Facebook to follow sports. I can read it and scroll it by myself. I like to look at this or at that. I like to do it this way. (Undergraduate student aged 19-22 years old)

Thai digital natives like to update trends all the time. The trends can be information about situations in the country or anything. It can cover everything. (First-jobber aged 23-24 years old)

It will be all the same but we have to open it all the time. It's like we have to update. (First-jobber aged 23-24 years old)

I will catch only significant issues or what people really pay attention to at that time rather than to look at trivial subjects to avoid being not updated and being unable to converse with people about that current subject so I am interested in only the highlighted topics. (First-jobber aged 23-24 years old)

I follow news on Twitter and then share it. The latest news is about Pop. (Undergraduate student aged 19-22 years old)

Sometimes, there is news on Facebook so I depict it to share to others. What is popular, then I use it. (Late secondary student aged 15-18 years old)

### (3) Content Presentation

The way most samples presented their content was to post and share on a social network by presenting the story about themselves or the story they were interested in. Some parts of the samples presented the content for commercial purposes, i.e. online purchase while some parts of them shared the content that they

thought was useful for others, i.e. to share the knowledge or teach or to suggest others about digital media, etc.

Digital natives are those who use online media to share their experience, their daily life, or their interesting story. (First-jobber aged 23-24 years old)

For my friends surrounding me, they use digital media mostly for uploading their images and sharing what people like to share on Facebook. (First-jobber aged 23-24 years old)

Like me, I often post on my Facebook wall, i.e. today I'm so bored, what should I do? Then I post it (laughing). I want other people's attention and want them to press Likes for me. (Undergraduate student aged 19-22 years old)

Now, I write a novel, an online novel. There's a web called 'Dek Dee.' It's writing without narration, but just chats and then write it. Right now, some people are crazy about my story so I think I may post some illustrations and then I will do page making for a book. I feel that I don't have to write in a limited frame but by my own will or to write without being judged right or wrong or by having someone tell me it's not right. Something like that (Late secondary student aged 15-18 years old)

I present my online products. I sell accessory parts and sell them by auction of millions. Also, I open a shop for fixing motorcycles. (Late secondary student aged 15-18 years old)

Mine is my bakery shop at home and sales online. Some adults or friends make an order and I will carry them to school. (Late secondary student aged 15-18 years old)

The good part of it is to share. For example, in the case of the leopard case, people entered to comment or to hashtag all the time to avoid being forgotten. (Undergraduate student aged 19-22 years old)

Something like a sharing of one-baht request, I also shared it but I did not know if they really gave it as mentioned in the Facebook. Another case was when a dustman's or ragpicker's hand was injured or stabbed by a ball stick so a request to break the stick before putting in the trash was shared. This is another way to make these people safe. (Late secondary school aged 15-18 years old)

#### (4) Content Use for Specific Purposes

From focus group interviews, the samples used digital media for various purposes, i.e. to apply for their daily life, for consulting problems, etc.

I used to apply the knowledge to help my father. This is really helpful for me. (Late secondary student aged 15-18 years old.)

I saw my friends use it for consulting on Pantip. Pantip is like sharing our experiences. Sometimes, they were stressed but did not know to whom they should talk. Some of them created a world of their own to protect themselves. (Undergraduate student aged 19-22 years old)

From focus group interviews, it indicates that the samples use the content for searching information, for following, and for presenting stories, which accord with qualifications of the websites of Twitter, Facebook, and YouTube they use regularly.

#### **4.2.2 Expertise in Digital Media Use**

Regarding the study of expertise on digital media use, the study covered the capability in using digital devices and applications adroitly, including the capability in using them for analytical and critical thinking thoughtfully when accessing and applying information for use, including for creating information or content.

### 1) The expertise on the use of a digital device

From focus group interviews, the samples had fundamental knowledge in digital devices and application and can choose them to use it properly for each purpose of use, which accorded with their lifestyle. The most used device was the device for following news or information.

In our daily life, online media becomes a part of our life already. When we wake up, the first thing is to find our phone. Form, the first thing is to update the information of the past 6-7 hours while sleeping. We will know right away what has happened. Similarly, we open news pages to follow the news. If we turn on our television to catch the news, it's too slow and not timely. Everybody's life is in a hurry. Therefore, if we are interested in any news online, we can focus on the news one by one but for TV news, it will keep on reporting for the whole days. (First-jobber aged 23-24 years old)

In addition, digital devices and applications were used to facilitate all activities for following certain interest skillfully, i.e. to search for tourism information, to share tourism information, or to book air tickets.

There are applications for ticket reservation or for buying tickets by ourselves. I felt very proud at first. Later, there are also reviews of tourism attractions that we can look through without going there. We can see photos, reviews, others' comments and feelings. Some people can even make their own video clips for us to see how the tourism attractions look like, or what is interesting food in that alley or soi. (Undergraduate student aged 19-22 years old)

Nevertheless, among higher-secondary students, they perceived that most of the users of their age had a moderate level of proficiency in using and selecting digital devices and their purposes of using.

Some of them know but some don't know. Parts of them know it partially. Some are quite good at using it but do not know all. For me, sometimes I do

not even realize that I can use some devices quite well. (Late secondary student aged 15-18 years old)

For first-jobbers, the selection of online features sometimes did not respond to its function. For instance, they apply features for other purposes, i.e. to share information with topics they are interested in but they had not read them yet in their page on Facebook for future reading to avoid some difficulty in searching for it. Such information might not be beneficial for people who read it.

Sometimes, I just share first in spite of not reading it yet. I just think that I will share it but I have no time to read it yet. Sometimes, the content is overwhelming and I can't summarize it. Some topics sound interesting but I have no time to read so I should share it first so that I can find it more easily when I want to read it. (First-jobber aged 23-24 years old)

Furthermore, the samples realized the use of digital media that were suitable for them and did not affect their physical and mental health. However, such realization often took place after they received bad experiences from physical and mental sickness.

I have started using SmartPhone since my first year. Later, I felt that my short-sightedness became worse and worse quickly. I thus decreased my use and set up an appropriate level of brightness to avoid hurting my eyes.

When I miss some news on TV or such news is not reported on TV, I will view from online news. However, the online news sometimes is too violent, i.e. news about violence in the Middle East or violent accidents. Sometimes, if we view this kind of news too much, it can scare us and affect our mental health. In the past, I was quite addicted to it but lately, I can't stand it so I will scroll it up or down to avoid seeing it. Sometimes, if it is unavoidable and still shows up on the wall, I will scroll down. (First-jobber aged 23-24 years old)

Still, the samples who were strongly aware of the consequences of the use of digital devices would primarily manage the use to avoid such consequences that might affect their health.

If it's a phone, we might be able to divide our time. However, for working on a computer all the time and sometimes we have to work with two computers at the same time, it is unavoidable. Therefore, we have to rest our eyes just for a while. Sometimes we have to work on the computer continually, so we can't avoid it. (First-jobber aged 23-24 years old)

## 2) Analytical Thinking and the thoughtful Use of Information

From focus group interviews, it was found that the samples had analytical thinking and could use the information thoughtfully in terms of techniques of creating accessible information, of screening information, and of interpreting the hidden meanings in the message or information.

When I see the headline of the news, I will read first and then decide what it is. I will expose to several sources of the topics I want to know or prove. (First-jobber aged 23-24 years old)

Mostly, I will consider which one is edited, fake or true. I will think thoroughly before I will believe in that news and will search for more sources before judging if it is true or not. (Undergraduate student aged 19-22 years old)

Actually, if they want to sell things, they should tell frankly. Anyway, I have some senses. Mostly, I know. (Undergraduate student aged 19-22 years old)

Additionally, it was found that the secondary-student samples mostly were recommended and advised by their parents and from their classes to be thoughtful in consuming media.

Sometimes, my mom scan for me but sometimes I have a look by myself but normally I don't care so much. (Late secondary student aged 15-18 years old)

My mother told me that it is crucial to post anything since it cannot be deleted. She said it's like a digital footprint. (Late secondary student aged 15-18 years old)

Like TV rate of R 18, (recommended by parents for viewers aged lower than 18 years old), the content may not be appropriate for the youth during these ages) my school also thought about this. I just can remember some. If I can remember, I will not watch it. Anyway, I don't like to watch TV so much. (Late secondary student aged 15-18 years old)

### 3) Content Creation

From focus group interviews, it was found that the samples of every range of age stated that at their ages improper content creation was still widely witnessed, which might be harmful to the creators themselves and for others. Mostly, the shares and comments expressed unscrutinized thought or lacked thorough searches of facts. Besides, some post and commented with rude or inappropriate words in social media. Furthermore, some people post and shared improper behaviors and stories of themselves and of others.

Some have already posted or post before thinking. Consequently, what is post can be interpreted with various meanings. Some interpret the meaning different from what the sender tries to convey so this can cause some misunderstanding. For instance, they may intend to talk about someone but we may think if they talk about us. Something like this. (Group participants laughed). (First-jobber aged 23-24 years old)

Many people will just post or comment about someone immediately or they might post what's in their mind without scrutiny. (First-jobber aged 23-24 years old)

To scold someone with improper words is quite detrimental. I think it's inappropriate and it can turn back to hurt ourselves in the future. For instance, some companies will check our profile on social media. (Undergraduate student aged 19-22 years old)

Its disadvantage is the teenagers like to show off their improper dancing. This can deteriorate society. Especially some foreigners always perceive Thailand in a negative way, i.e. the country of prostitutes, etc. Therefore, this kind of news can even increase the negative image of Thailand and affect the tourism image too. (Undergraduate students aged 19-22 years old)

Males and females are divided. For me, I'm a commerce student and also a motorcycle girl so I post a lot of images, i.e. when I was fined 500 baht, when I raised some questions, such as what did I do wrong? or did I bother anyone? Sometimes, I posted that I took Po. What is Po? Po is a kind of a coughing syrup mixed with painkiller drug. Some males and females took Po. Moreover, for females, most posts are about quarrels. Like my close friend, she was plucked. She used to belong to one group but she withdrew from the group so she was scolded so severely. It's a pity because those people cursed her with bad words and also scolded up to her parents. They dug all of her past stories from Facebook, IG, etc., and posted them on social media. (Late secondary student aged 15-18 years old)

Some illegal things are also posted, such as drugs, i.e. Kratom (*Mitragyna speciosa*), marijuana, etc. They took photos by themselves. (Late secondary student aged 15-18 years old)

For overall expertise in digital use, the samples had basic knowledge of using digital devices and applications by choosing the devices and applications responding to their purpose and their lifestyle. However, there were also some types of functions they applied to facilitate their use without concerning about the effect on others. On the other hand, they possessed some fundamental critical thinking that enables them



to distinguish the credibility of the information received in combination with some advice from their parents and school, especially in the group of late or higher secondary students. Regarding the content creation, the unthoughtful creation by posting improper content was found, which may be harmful to themselves and for others, which should be the issue to be cultivated further in the future.

#### **4.2.3 Digital Media Use of Thai Digital Natives as Digital Citizens**

In cultivating the concept of digital citizenship for digital natives, one important thing that should be studied is the use of media of digital natives as a digital citizen since most of the digital natives spend their time in the online world (as shown in the quantitative findings from survey research). Accordingly, the fundamental understanding of their use of digital media as a digital citizen can help to classify their characteristics of digital citizenship. For the focus group interviews, four dimensions were classified and analyzed as follow: 1) The understanding of digital citizenship of Thai digital natives 2) Responsibility in digital media use 3) Social participation in digital media 4) Social justice preservation in digital media

##### 1) The Understanding of Digital Citizenship (Understanding Citizen)

From the focus group interviews, it was found that the higher secondary students had basic theoretical knowledge on digital citizenship but they did not realize that something they were doing was a part of performing as a digital citizen. Mostly, they just understood that it was a good thing to do.

Now, we have not reached the stage of making our own decisions yet. However, when the democratic system comes, we can do an election on our own. It was a sign telling us that we are ready to be an adult. The first thing we have to be ready to learn is the basic knowledge of human beings, namely, we have to learn about the acceptance of other people's differences. The social problems we face now is clearly often caused by our focus on others' differences and by separating them from our group but it should not be that. To be a good citizen, we have to understand basic manhood. (Late secondary student aged 15-18 years old)

For undergraduate students and first-jobbers, they knew their rights and could criticize as a citizen, i.e. governmental welfares and services, etc.

I think I have quite a modern device at one level, which I mean my SmartPhone. However, for the support of the government in terms of technology, I think it's still insufficient. By policy, it should be complete support but in fact, it is not full support as stated in the policy. For instance, I used to use WiFi on a bus. According to the policy, the government wants people to use WiFi on a bus but sometimes it works and sometimes it does not, possibly because of poor signals. Personally, I can afford using and access it but if we will wait for the government's help, we will not get as stated. (First-jobber aged 23-24 years old)

The government does not provide us so much knowledge about this so we have to know by our own if we want to be a good digital citizen. The government does not play a role in helping people to access technology properly. (Undergraduate student aged 19-22 years old)

Like Thailand 4.0, it should reach the point that WiFi is available all through the country. This is something they should concern. Once they want to develop the country towards 4.0, they have to develop this, but maybe they don't know where to start. (Undergraduate student aged 19-22 years old)

## 2) Responsibility in Digital Media Use (Socially Responsible Citizen)

From the focus group interviews, it was found that the higher secondary students had a fundamental responsibility in using digital media or they complied with rules and regulations in using the media, both established by their family and by the Information Service Provider (ISP).

I will not use Facebook nor Line. For Instagram, it is allowed when I reach 17 years old. Now, I'm thirteen, I can play but it must be under the supervision of my parents until I am seventeen, then it will be easier to use it. I will comply

with my parents' rules. They are quite strictly protective. They will watch our time using social media. Some of my friends have used Facebook since they were 12 but my dad did not allow me to do so. Now, I'm 13, I don't need it so much and don't care if I can use it or not. What I want is just to post the images I take. Thus, I don't do much and everything has to be approved by my parents. (Late secondary student aged 15-18 years old)

Besides, the samples expressed their social responsibility, i.e. to have digital etiquette and try not to use any digital devices that showed their rudeness, either in the working place or in the classroom.

I know that to use communication technology, we have to concern about our manner and need to think about time and place where we communicate. At present, people are addicted to social media but sometimes they ignore the good manner, i.e. they should not use them in some places or in some occasions. I myself sometimes use online media in class. It is easy to lose awareness so I will turn on and off often. However, for working, this consideration is more serious. If you miss it, it cannot be corrected. Sometimes, when we meet the elder and we play with our phone, it makes us look very rude. (First-jobber aged 23-24 years old)

Once I'm in the classroom, I automatically use my phone. No matter how strict my teachers are, I always take a glance to look at Facebook, Instagram, Twitter every minute and keep scrolling for reading. (Undergraduate student aged 19-22 years old)

Nevertheless, the samples realized the effect on them and others, especially the effect of the correctness, i.e. correct language. Since digital natives often used the wrong language, they needed to be cautious, especially on the appropriateness that would not violate their own and others' privacy and would not defame others.

People nowadays don't care much about using wrong words. In the past, people were serious when any news used the wrong ones. Now, they don't care much but just pay attention to having a chance to post or to be quick. (First-jobber aged 23-24 years old)

When we want to share something, we have to be cautious and don't share it too quickly. We have to start with ourselves. When we read, we have to think about it carefully and will not trust any information too easily. Caution and scrutiny are needed. Besides, we have to be careful with our words. Anyway, normally I will not often post any comment but just read and then pass it. (First-jobber aged 23-24 years old)

Furthermore, it was found that the samples perceived some users of their age used online media in an unethical and illegal way without concerning about the negative consequences, i.e. to post their image while taking drugs, to condemn or to revile others on social media.

There were some people posted or added some improper things on social media to show their illegal behaviors, i.e. taking drugs like Kratom, marijuana. They took the images by themselves. I saw in their IG but I did not say anything. Sometimes, they sent to a group of friends so I said I knew what they were doing and then I left the group. Friends at school sent such illegal posts occasionally and some of them sent their VDO clips while taking drugs. (Late secondary student aged 15-18 years old)

Males and females are divided. For me, I'm a commerce student and also a motorcycle girl so I post a lot of images, i.e. when I was fined 500 baht, when I raised some questions, such as what did I do wrong? or did I bother anyone? Sometimes, I posted that I took Po. What is Po? Po is a kind of a coughing syrup mixed with painkiller drug. Some males and females took Po. Moreover, for females, most posts are about quarrels. Like my close friend, she was plucked. She used to belong to one group but she withdrew from the group so

she was scolded so severely. It's a pity because those people cursed her with bad words and also scolded up to her parents. They dug all of her past stories from Facebook, IG, etc., and posted them on social media. (Late or higher secondary student aged 15-18 years old)

Besides, they perceived users of their age violate others' rights and did not accept the diversity or differences of other people. Sometimes, they expressed improper social manner via digital media as they thought that other people could not identify who they were.

Many people posted or commented about other people by posting what they thought without accepting their identity or personal interest. For me, if I don't like, I will tell directly that I don't like but I will not use the word "incorrect". Probably, it's better to use the word "inappropriate". For people who were paid high attention, they would be criticized often on social media, especially by keyboard gangsters. Therefore, when they see us, they will not speak anything but when they don't see us and others do not know about us, they can post anything they want to. I think they'd better talk to us. (Undergraduate student aged 19-22 years old)

### 3) Social Participation in Digital Media (Participatory Citizen)

Concerning social participation in digital media, it was found that the samples used digital media for social participation at various levels: family, school, and society, with different purposes. The samples at secondary education level used digital devices, i.e. Group Line, etc. for helping one another in terms of learning or assignment, Video calls for tutoring or sharing the content of the lecture, etc.

In Group Line, we call in the group. Sometimes we use Line for meeting with friends or for tutoring. In Group Line, sometimes we receive about 400 texts related to tutoring. (Late secondary student aged 15-18 years old).

For me, it will be a video call for tutoring 2-3 weeks in advance before an exam since the first semester I study. We have four persons in our group, which is quite a small group. All of us have quite good grades so a teacher said that we should not leave any of us behind. We thus always help one another. Some people from other groups also ask for our help. (Late secondary student aged 15-18 years old).

In addition, digital devices were used to support the family to gain more income.

For me, I use it at home. Our family business is a bakery shop. We sell dessert online. Most buyers are adults or my friends. I will carry them to school. Mostly, people in school order coconut-stuffed dessert. (Late secondary student aged 15-18 years old).

Additionally, the samples used digital devices for participation as a member of the society for the benefits of other people and of the general public, i.e. to share information for helping others without checking as it is good deeds for the society.”

I saw a video in which a teenager drove his car while using a phone and ran into an old man. Once I saw it, I shared immediately. The teenager used the phone, his car ran into the old man, but he got off the car to hit the old man. That’s terrible. (Late secondary student aged 15-18 years old)

Something like the sharing of one baht, I shared it but I did not know if they really gave it as mentioned in the Facebook. Another case was when a dustman’s or ragpicker’s hand was injured or stabbed by a ball stick so a request to break the stick before putting in the trash was shared. This is another way to make these people safe. (Late or higher secondary school aged 15-18 years old)

#### 4) Social Justice Preservation in Digital Media (Justice-Oriented Citizen)

In terms of the use of digital media for keeping social justice, it was found that higher secondary students shared some information to call for interesting social-justice issues.

There 's one video in which a basket full of money falls down from the top to a government office and then to people, the remaining money is only a coin. The full money in a basket in the hand of government reduces to only a small coin when it reaches people. I like it very much so I shared it. (Late secondary student aged 15-18 years old)

Still, digital natives exposed to the information related to social justice superficially. In other words, they just viewed video clips that were in current trends and then forwarded to others. They would search for more information only for the issues in which they were highly interested. Besides, the samples suggested that to make digital natives of their age aware of social justice, creative content should be able to get people's attention like to a social current.

I saw some and now I still see some too. In IG, some people just share, no matter if they read it or not. Like CHANGE.Org, there are some but I do not pay attention to every issue because it is too long. (Undergraduate student aged 19-22 years old)

There are some posts like those on the panther news. There are a lot of posts about it. There should have some kind of process to draw people's attention first, then people will join our society and also for the trend, or both. It is like that when a trend comes, it makes people think and concern more about it to see how much effect it will cause. (First-jobber aged 23-24 years old)

### **4.3 The Summary of Research Findings on the Digital Media Usage Behaviors and Digital Citizenship of Thai Digital Natives**

From the survey of media usage behaviors, it can be concluded that the respondents used online media averagely 5-6 hours a day and most respondents connected with internet through the 4G signal. The place the respondents used digital media the most was their residence and the digital device used the most was SmartPhone. In order to obtain a wide variety of useful information for the construction of a conceptual framework for digital citizenship suitable for Thai society, the researcher conducted focus group interviews with digital natives. It was found that the samples used digital media on a multiplatform and preferred using Twitter, Facebook, and YouTube regularly. The factors for choosing platforms for each media were update, rapidity, variety, credibility, interest, and interactivity. The samples aimed to use the content for searching information, following the news and presenting information, which was fitted with the qualification of each platform and social media (Twitter, Facebook, and YouTube) that they used regularly.

Concerning digital media usage behaviors related with online expertise and the media use as a digital citizen, it was found that the digital natives expressed that they had digital expertise at a high level, especially in searching for information. For the opinions on the use of media towards digital citizenship, the samples used their digital media as a digital citizen at a high level. The most concerned dimension was the ethics and social responsibility without causing any defamation or a negative effect on others' ways of life upon their sharing of information, images, or any texts.

However, from the focus group interviews on digital expertise, most samples thought that they had fundamental knowledge on using digital devices and applications by being able to choose the right ones that responded to the purpose of their usage and accorded with their lifestyles. Besides, they pointed out that some digital natives of their age used digital devices to facilitate their activities in following their specific interest adroitly, including being aware of using what was suitable for them. On the other hand, they perceived that the understanding of digital media uses and the selection of devices to serve their purposes were at a moderate level.



Furthermore, the samples perceived that they had analytical thinking and scrutiny to create information, to screen information, and to interpret the hidden meanings behind the information. Still, some samples viewed that some digital natives of their age created improper content that might be harmful to themselves and others. Mostly, they shared and commented without scrutiny or searching for facts first. Besides, posts and comments with vulgar or improper words towards others were witnessed on social media while some users shared and post their own and others' improper behaviors through digital media.

Regarding the opinions of the samples towards the level of their digital citizenship, it was found that most samples perceived themselves to have a high degree of digital citizenship. When classified by each issue, it was found that the characteristics of digital citizenship mentioned the most at a high level was the accessibility to digital technology. On the contrary, from the focus group interviews, it was found that digital natives of different range of age understood digital citizenship differently. Specifically, the higher secondary students had a basic knowledge of digital citizenship at an only theoretical level without realizing that something they were doing was a digital citizen' duty. Undergraduate students and first-jobbers knew their basic rights and also could criticize the government's work, which was also a part of fundamental digital citizenship. In other words, they were responsible for themselves or complied with the rules of digital media use as stipulated by both their own family and by the Information Service Provider (ISP). Furthermore, undergraduate students and first-jobbers were responsible for their social expression via digital media and concerned about the consequences caused by the improper use of digital media. On the other hand, they perceived that users of their age mostly ignored those things. In addition, the samples used digital media for the studying engagement, increasing their families' income, and for public benefits. Still, in terms of the digital media use for preserving social justice, most of them focused only on the issues in which they were interested and which were the social currents.

From the survey research on digital media usage behaviors and the level of digital citizenship of Thai digital natives, it was found that digital natives of different ages understood digital citizenship differently. Furthermore, it was found that the

relationship between their behaviors and the characteristics of digital citizenship in the dimension of digital laws and ethics, digital rights and responsibilities, digital security or self-protection, and digital health and wellness in the digital world was at a low level. Thus, the digital media use of Thai digital natives towards digital citizenship still has not reached the high standards, which require all the aforementioned characteristics of digital citizenship at a high level. Therefore, their present digital-media usage behaviors have not yet facilitated to uplift their digital citizenship in all dimensions. However, since the measurement of the level of digital citizenship was designed and based on western theoretical concepts and studies, to use such measurement in Thai society may be necessary that such concepts are adjusted to suit for Thai society. The design of the concepts and characteristics of digital citizenship suitable for digital natives in Thailand was conducted and reported in the next chapter.

## **CHAPTER 5**

### **THE CONCEPTS OF DIGITAL CITIZENSHIP SUITABLE FOR DIGITAL NATIVES IN THAILAND**

This chapter was synthesized from the findings from documentary research and in-depth interviews with ten experts to construct the concept of digital citizenship and its attributes suitable for digital natives in Thailand. The research findings were divided into three parts as follow:

- 1) The findings from the study of contexts related to digital citizenship in Thailand.
- 2) The findings from the study of concepts and attributes of digital citizenship suitable for digital natives in Thailand
- 3) A summary of the survey of the concept of digital citizenship suitable for Digital Natives in Thailand.

#### **5.1 The Findings from the Study of Contexts Related to Digital Citizenship in Thailand**

In studying the contexts related to digital citizenship in Thailand, the researcher divided the findings of this part as follow:

- 1) Government policies related to digital citizenship
- 2) The situation of digital citizenship in Thai society context

##### **5.1.1 Government Policies Related with Digital Citizenship**

The continual and rapid technological advancement, especially in the digital world, which connects with daily human activities without time and space limit has caused social changes, especially roles and duties of citizens. To do any action for a harmonious co-existence in society requires primary citizenship and such citizenship

needs a media literacy skill as a significant factor in a democratic society. However, literacy skill in social activities is related to proper skills in accessing information and in the process of using adequate information.

Due to technological growth in combination with the policies of moving towards Thailand 4.0 or Digital Thailand, the changing exposure behavior and public interest in information and the receiving of data from various communication channels are more complex and pass through a multiplatform by the modern technological system that has been developed continuously. The channels enabling citizens to access information through different methods and being congruent with their lifestyles have been provided accordingly. In the past, people selected to expose to information via traditional media, i.e. radio, television, newspaper, and magazines; however, at present communication devices were developed with different sizes and attributes, i.e. Genius SmartPhone, tablet, application, and Digital TV, including the emergence of social media, i.e. Facebook, Twitter, Video Online, Instagram, and blog. Such development induces changes in human behaviors since alternative media on screen is available for each person to choose to respond to his or her needs.

Still, the use of technology in Thailand is in the stage of imitation since Thailand is not the manufacturing country of these new technologies and Thai people lack an understanding of how they operate or how to use them towards maximal benefits. As a consequence, Thailand is just a follower of the leading countries in technology. The inferiority in the universal language, namely English, and in technological creation, obstructs the development of common digital-media usage behaviors desired widely by the global society. A continuous process can accomplish the connection between the nation and the world. On the contrary, the inanities filled with a separation caused by the different focused identities. Unless there will be a movement of universal ideology that accords with the United Nations, i.e., human rights, such a connection will not be succeeded. (Sukanya Soodbantad, 2017).

From documentary research on the government policies related with digital citizenship in Thailand, the structure of government policies in Thailand was found to support the digital technology, i.e., the policies of E-government or Digital Economy, etc. Hence, this leads to the infrastructure development of information-processing technology to grow much faster than the cultivation and development of people in the

nation or its users. Accordingly, according to the National Economic and Social Development Plan, Issue 11 (B.E. 2555-2559), which emphasizes the human development and the national development through an immunization at all levels: individual, family, and community, towards a quality society to be able to manage the risks and to adjust itself to the changes. Besides, a part of the National Economic and Social Development Plan, Issue 12, adheres to the principles of national development towards stability, sustainability, and peaceful co-existence in the society. All of these are based on human development that accords with the policies of Thailand 4.0.

Digital Thailand means Thailand can create and make use of digital technology fully in developing infrastructure, innovation, information, human capital, and other resources to mobilize the national economic and social growth towards national stability and sustainable development. The Digital Development for Economics and Society Plan aims towards four main goals as follow:

- 1) To increase the potentials of national economic competitiveness by using innovation and digital technology as the primary tool in creating production innovation and service
- 2) To create an equal opportunity in society to access information and services through digital media to raise standards of people's quality of life.
- 3) To prepare all concerned personnel to have knowledge and skills appropriate for their living and their professions in the digital era.
- 4) To reform the government's working and service paradigm by digital technology and by full use of information to achieve transparency, effectiveness, and efficiency.

The Thai government puts high importance to build digital society and Economics and to transform Thailand to be the leading digital country in the ASEAN. Digital economics is vital for mobilizing innovation, competition, and growth at the international level. On the other hand, the Ministry of Information and Communication Technology has drafted the National Digital Economic and Social Development Plan since 2016. The target and indicators of the digital economic and social development are as follow:

- 1) To create equality in society to have 100% of Thai people be able to access the internet and standardized public service.

2) To increase global competitiveness with the target of gaining 25% of the GDP of the digital industry.

3) To transform government offices with the target of being ranked as 1-50 top of the United Nations. At present, Thailand is ranked at the 102th from 193 countries

4) To support human capital development towards the digital world with the target of having 100% of Thai people know media literacy. (The Ministry of Information and Communication Technology, 2016).

#### Indicators of Digital Economic and Social Development

The government conducted a bid of 1800 and 900 MHz Band in 2015 with a purpose for developing national digital infrastructure, i.e., the adoption of Broadband internet to 30,000 villages. At the same time, Thailand cooperated with private sectors in establishing the national information center to support the digital economic development, the development of international gateway access, and free broadband access. Besides, Thailand started to work on an underwater cable system for transmitting and receiving digital information between ASEAN countries and the world. Furthermore, the Japanese cable system will be used in Thailand to connect with Hong Kong, Taiwan, and Japan, which enables Thailand to be a digital center genuinely.

#### 1) Digital Technology for an Equitable Society

DTAC started to operate the Smart Farmer Project with Sam Nuek Rak Ban Kerd Foundation, Ruamduay Chuaykan Radio Station, and the Ministry of Agriculture and Cooperatives of the Kingdom of Thailand. The project supported young farmers aged between 17-45 years old throughout the country by applying technology to improve plantation and agriculture, to gain price cooperation, to promote innovation, and to train and provide knowledge about pool agriculture. The trainees applied the use of agricultural information program designed by DTAC, which produced agricultural knowledge and tips in the form of VDO clips. The program installed the prices of Thai SME products, and online shops can do an E-commerce directly with consumers. Such knowledge enhanced the power of more than 250,000 farmers.

## 2) Digital Innovation Ecosystem

The government promoted digital innovation and simultaneously created a Dynamic digital ecosystem through the approval of the National Technology and Science Committee and Office of Small and Medium Enterprises Promotion, in collaboration with affiliate networks of both private and government sectors. To stimulate economic growth via digital innovation and to increase the potentials of entrepreneurs of the small, medium, and large enterprises, a business center was established, the supportive environment for technological entrepreneurs was promoted, and the international competitiveness capacity was enhanced. The government aimed to increase the coverage by building the community digital information-processing center to support economic activities and the industry related to “One Tambon (district), One Product or OTOP. The goal of such policies is to encourage villagers to participate in E-commerce and to ensure that digital development is the policy of "from inside to outside.” Digital skill at the regional or local level was developed to stimulate the local development, to support farmers to use new technology, and to enhance food business and information-processing technological industry in the rural, not urban area.

## 3) E-Government Services

National Superhighway Network” is called as “the Government Information Network” (GIN) or “Super GIN,” which is under the establishment through the connection with the information system of the present Government. This network makes it easy to access public information and leads to economic development, natural-disaster protection, illegal business and criminal activities protest, including safety issues management.

## 4) Human Capital

The goal of digital economic planning is to create IT laborers for international competition and to enhance their digital literacy and inclusion at the local level. Policies comprise four goals to increase creativity in using digital technology in business and government sectors in parallel to increase young laborers into the technology field and to produce digital experts with standardized skills at international level.

In developing human resources according to Thailand 4.0 strategy, one of the main goals is to develop human capital, who are digital natives of Thailand, aged 15-24 years old, who was born together with technology, and who use technology the most (ITU, 2013). This group of people is the dominant force in driving information technology of the country. Besides, these people are confident of their expertise in using digital devices to access or in creating media in the online world more than their parents, teachers, or who have duties on teaching. However, from empirical data on various media, it was found that Thai digital natives lack digital literacy for analyzing and distinguishing media content and require the use of multiple media rationally. This lack of digital literacy can be seen from some examples, such as the addiction to the games, the access to filthy or obscene media, the comments, shares, and posts without concerning about the consequences that might happen to themselves and others. All of these indicate a lack of responsibility and understanding of the proper rights of a digital citizen or physical-world citizen.

Therefore, due to the rapid changes of global society, a citizen who can only read, write, calculate and know the science of technology is not well-qualified for the modern world. On the contrary, a digital citizen needs to learn global changes and their society's changes which require social organization in politics, economics, and culture, especially administration system as a frame that they have to comply as a member of that society and as a part of community, society, nation, and the world, including digital world.

### **5.1.2 The Situations Related to Digital Citizenship in Thai Society**

#### **Context**

From an in-depth interview with experts on the situation of digital citizenship in Thai society context, the findings were divided into four main topics:

- 1) The relationship between social condition, the national governance system, and digital citizenship
- 2) The government's support for digital citizenship
- 3) Digital natives' usage of digital media
- 4) Digital natives in Thailand and citizenship through digital media

The details of each topic were as follow:



### 1) The Relationship between Social Condition, the National Governance System, and Digital Citizenship

In synthesizing the concept of digital citizens, what should be concerned is social condition and the national governance system because both can reflect conceptual foundation and practices, including fundamental factors of citizenship or digital citizenship within a country. From the interviews with experts, it was found that a different social context gives different importance to the concept of digital citizenship. Some social contexts emphasize the political participation of people. For instance, in Europe, they emphasize the idea of “digital possibilities” (anything digital that can help people towards more productivity and well-being) to encourage social participation while in American context, its society focuses on capitalism basically, which is a social mobilization in terms of commerce, and on digital possibilities of people to catch up with global movement from capitalism approach.

I think in Europe, the digital world is a new possibility for power and your exercise of power and citizenship is about the relation of the individual to the established power. The American approach is much more than that. Well, of course, they often have a debate about it, but one idea is the media is primarily associated with the economic influence, and we must teach children how to be digitally literate in order not to be influenced by the commercial pressure. Therefore, digital literacy is needed in America. So the kids do not get fat from McDonald's advertiser. It is a different one. And it's a sort of works too. I mean insofar as young people are bombarded with commercials. (Livingstone, personal communication, November 5, 2016)

From the experts' view, the concept of digital citizenship should be beneficially used in all segments: occupation, social adaptation, self-identity, cultural identity, and wisdom, etc. The creation of public conscience should start from self-conscience first.

Furthermore, to synthesize digital citizenship based on the frame of national citizenship, all issues related with citizenship have to be considered, i.e. rights, duties, and responsibilities, and acceptance of belonging to a group as a citizen in order to

connect with their identity in the society of both real and virtual worlds for a co-existence.

The concept of a citizen is broad. When we talk about this concept, at least three things have to be mentioned: rights, duties and responsibilities, and group acceptance or a sense of belonging. The first thing is understandable. The government gives rights to its people, and thus the government has to protect such rights for them. The second thing, duties, and responsibilities is expected by society and specified via some mechanisms, i.e., constitutional laws. The third thing is a sense of belonging to a society. Therefore, for citizenship, these three things must be controlled. Each country has its national citizens so digital citizenship can overlap with national citizenship in the real world. Consequently, a sense of belonging covers two senses: a sense as a real-world citizen and as a virtual citizen. In terms of global citizens, there are common concepts: the respect of other people's rights and the awareness of ones' rights. On the part of duties and responsibilities, it is the duty and responsibility in the co-existence and the awareness of being members of the same group to help to live peacefully in both real and virtual worlds with mutual respects. However, how can we manage these three things? It is necessary to cope with each dimension individually. For example, cybercitizens require accessibility, protection of privacy. For real-world citizenship, it involves rights and freedom in ways of living and working with legal roles and duties that are determined in the Constitution, including the dimension of citizenship that relates to culture, which connects to a self-identity. These are some common and shared things. (Assistant Professor Athapol Anunthavorasakul, personal communication, January 17, 2018).

Besides the connection with self-identity in the real and virtual worlds to reflect a co-existence in a digital context as citizens, the management of the citizens' image as appearing in the digital world is what to be concerned as well.

Digital Citizenship involves online identity management. That's a term that's resonated. (Tyner, personal communication, November 5, 2016)

Besides, Thailand is a democratic country, so Thai people have to comply with the Thai constitutional laws and understand the basic principles of their citizenship. Beyond the duty to vote in an election, Thai citizens have to know and understand their rights and responsibilities in social participation and practices. In other words, they can use their potentials righteously according to the constitution. The said citizenship is also required and desired in the digital world. Accordingly, the concept of digital citizenship involves the rights to access the information-driven in the digital world with responsibility in their access, use, and production of information, as a part of social involvement through a sense of belonging to both digital and real worlds. The respect for others' rights as a part of their roles in the digital community with responsibility while accessing and searching information for the use in the real world is also included.

Both worlds have the same goal of creating a democracy, so the concept of digital citizenship determines what kinds of citizens we need. If we need democracy, we have to create people to serve such a goal. People in democracy system have to be able to think and analyze things, including expressing their ideas. Is it correct? That is to use their potential. To the question of why they need to express their ideas, it is because they have to participate in a society in which they are a member. They cannot live and think about their own life, but they have to involve in the political system to help to create a good society. (Nonthasruang Kleebung, personal communication, December 24, 2017)

Democratic citizens are specifically people who have to concern about three main concepts as aforementioned to comply with democracy ideology. When the concept of citizenship is tied with the digital matter, digital citizens have to comply with the same ideology. Children born in the digital era have to know their rights in accessing information in the digital world in combination with

their responsibility of accessing, using, and creating information as well. To achieve the sense of belonging to the digital community, they thus have to respect the rights of others and concern about their roles of using digital information in the real world. (Athapol Anunthavorasakul, personal communication, January 17, 2018).

Values of society is another main issue because, besides laws, values also determine the frame for social practices. One of the rights which is universally accepted is the rights of one's own culture or the preservation of cultural identity based on democracy ideology. Therefore, citizens as a part of national citizenship should comply with ethical frames adhered in society.

To understand the membership in Thai society, it is essential to synthesize the concept of citizenship with values of the society. In terms of national citizenship, the main duty of the government is to shape up people to be the type of people they expect to be through either formal or non-formal education. What the government expects their people to be is based on the frame of what is written in the constitutional laws. However, from the cultural perspective, people have to realize that they also have some shared identity with others or if they have a different identity from others, they have to respect others' differences and value different identity of people. The constitution protects all citizens for their co-existence. The rights of culture are another thing that is covered. The rights of preservation of cultural identity, including sub-cultures, are based on democracy ideology, which also respects human rights. (Athapol Anunthavorasakul, personal communication, January 17, 2018).

## 2) Government's Support for Digital Citizenship

From analyzing the support of the government for digital citizenship, it was found that the Thai government has adopted the country towards digitalness for a service through complete digitalization under the policy of Thailand 4.0. Examples were the adaptation to match with people's lifestyle, the convenient provision of

public information from the digital database for serving people and for the governance of the country, etc. It is also essential to create high standards in developing the country to be relatively equal to other countries.

In service works, the digital channel is increasingly used, and so is digital purchase. Since the lifestyle of people changes, Thailand has to adapt itself; otherwise, it is difficult for the government to continue its governance. The government here covers all government offices and units. Due to the policy of Thailand 4.0, everything has to be adjusted seriously. (Thitipong Nandbabiwat, personal communication, February 27, 2018)

Furthermore, the inequality of people in the society is the main obstacle for the development of digital citizenship, which the government sector has to correct to enhance equality in a society and decrease digital divided. All factors relating to the digital divided, i.e., income, education, etc., which lead to the inequality of technological experiences, have to be concerned. Besides, the structure, signal network, and systems for supporting the service for people should be established. In short, the government should have high importance to the preparation of both systems and human resources based on the national readiness and apply all foreign concepts suitable for Thailand to adjust the country towards a completely digital society.

The inequality, i.e., income, etc., will lead to other problems of the society. For instance, our financial problem is caused by the inequality between the rich and the poor, and this causes conflicts through political agents. Like Thailand 4.0, when we use the world standards to develop Thailand, we have to prioritize which should be developed in order. Then, what should we start first? I think other matters should not be initiated yet and we should start with our identity card to be digital, or we start with digital access first. Even, the word “access” is vast. Has the government established infrastructure enabling people to have 100% digital access yet? Also, if “access” means to get into data or information, it ends because it has to enter or access the information with scrutiny. Furthermore, our structure is not appropriate for driving the

country towards digital society in many ways, i.e., for online business, any country will focus on this must have unity in the country. On the contrary, our Ministries are not united. I want to recommend this to the government. E-commerce of Thai government sectors is very poor. What they know is theoretical knowledge or the knowledge they adopt from foreign countries without considering our context. We are private sectors working with government sectors. We have to tell them that you cannot use their theories literally because the environment of Thailand is different. (Worawut Ounjai, personal communication, January 17, 2018)

Mainly, the educational gap is another obstruction for digital citizenship development. The government should pay attention to find ways to create people's understanding and create a knowledge tool for low-educated people as a basis before leading the society to be a digital society or digital citizenship.

Some people have no opportunity to study so this is the government's challenge to decide how they can communicate to these people to understand that our world has changed and everything surrounding them has changed too, including all kinds of service that used more digital channels. The government offices in each part of the country or each province should perform this duty to give knowledge and make them understand the current situation. We have to let them know that we are moving to a digital society and they are going to be digital citizens. (Thitipong Nandhabiwat, personal communication, February 27, 2018)

Still, this significant problem has not been solved completely, and digital development has not been distributed widely to the local area.

The government said they would establish high-speed internet in every village, but they still cannot accomplish this. Korea is No. 1 in doing it 100%. They have new creative media widely. Our government still has not created equal

access so much. (Settapong Malisuwan, personal communication, October 29, 2018)

Another barrier against the development of digital citizenship by the support of the government is that some groups of people do not trust the government's working system. Therefore, what the government needs to improve is to create trust among people under their E-service context.

One thing they are afraid of is why the government wants to use their data. The government should be responsible for surveillance of our well-being but, on the contrary, the government can use our data for its benefits. That's what they are afraid the most. Therefore, the government who can ask for full information from its people must be a government that is very trustworthy from the perception of its people. Then, trust can lead to active digital citizenship.

The great credible working of the government must be perceived as advanced or modern. As an example, to pull an ID with a driving license, an insurance number, and the bank account must be very cautious. It is effortless for someone to do a digital transaction if he or she can access the ID. So, who wants to have all their ID combined? On the other hand, today we still have to depend on our ID for opening a bank account for getting a driving license, and for buying insurance. This example is only one topic. (Worawut Ounjai, personal communication, January 17, 2018)

Moreover, from the interviews with the experts, it was found that the government sector still faces a problem of developing the country towards digital citizenship. That problem is the development of government officers to understand the working system of E-service for people.

First of all, the government must have officers understand the system. Our country's problem is that persons who issue the laws understand the business system but have no knowledge about online or digital system well enough.

They do not understand the advantages and disadvantages, and the purpose of using each system truly. What they know is theoretical, but they cannot operate in real practice. (Worawut Ounjai, personal communication, January 17, 2018)

Another obstruction for developing people to be a complete citizen in some countries via digital technology is that people themselves do not want to be such citizenship because of their anxiety about the risks that can occur from their social participation as a citizen and the dangers of having their information stolen for commercial use. Accordingly, people perceive that the risks are caused by their social involvement at all levels as a citizen through the use of digital media, starting from the level of awareness of their citizenship, the level of participation as a citizen, and level of expression as a citizen. All these levels are risky for their privacy, i.e., being followed, being detected by the government, etc. This fear causes them to feel of having no freedom, so they do not pay attention to be a complete citizen through the use of digital media. The reasons people are afraid are that their information is used improperly or illegally in commerce or business context, i.e., to use as a marketing target, to violate their privacy by keeping transmitting or sending unneeded information, etc. All of these are the reasons why people oppose the use of digital media as a complete digital citizen.

So the concept is that when you think about common practice. It's not just one thing it has steps or increment. By the first increment would be like awareness, just plain awareness of an issue or a topic or something. So awareness is a first. And then, engagement is another step. In the next step is engaging which takes a little bit more time a little more a bit more risk to become engaged. In the next step would be an action which takes a lot more risk and a lot more time. Therefore, the fact that people are not involved in politics and digital. So with digital engagements, first of all, you know, I would say privacy and surveillance. And as we see in countries, I don't want to name any. There are many countries where you are monitoring. In The States, you're usually monitored when they try to sell you something, but not always. And many



countries it moves from just trafficking your information to monetize it to trafficking to for political reasons, and it can be very cruel as you know. So that's a risk. (Tyner, personal communication, November 5, 2016)

As a consequence, in developing the sound characteristics of digital citizenship, a clear indicator should be created for young people to monitor and evaluate themselves to see some missing features and stimulate them to improve themselves in those weak points.

At first, it is good that the concept of digital citizens has been translated into Thai based on foreign concepts. Especially for the young generation, to communicate with them and suggest they should be in the form of self-analysis or letting them ask questions for themselves if they possess all nine qualifications yet. Therefore, indicators for evaluation are helpful for them. Such indicators can be gained from the focus group interview with young people and summarized them to be policy recommendation. There has been an effort to raise some samples, which is good, but we should make them more distinguished. (Supinya Klangnarong, personal communication, October 29, 2018)

On the other hand, to communicate these concepts more effectively, the government should support all organizations and offices or even for digital natives who intend to be a direct communicator so that such ideas can reach their target.

It is not necessary that the government sectors have to conduct the program by themselves. They might let some associations that they trust, i.e., Office of Health Promotion Foundation, etc., which are more international. For example, E-Sport, adults may perceive that E-sport causes near-sighted problems but instead you have to put in the right place. I agree with the concept of digital citizenship but don't let the government do it. They cannot do it because children are afraid of being monitored. The government should let private sectors help, and of course, they want to do their CSR about this.

Or it can be any foundation, i.e., Paralympic should be ok. If the Ministry cannot do it, they can support in some ways, i.e., having small logos saying like they do not involve directly, but they agree or support. They should concern about lifestyles and values of new generations and choose people of that generation to be communicators. (Settapong Malisuwan, personal communication, October 29, 2018)

### 3) Digital Natives' Usage of Digital Media

For the use of digital media of digital natives, from the perspectives of experts, the digital media that digital natives use the most is social media to get the needed information. Due to its rapid technological dispersal, it makes the digital nativity grow very fast in Thailand. Thus, digital nativity plays a part in supporting the economic mobilization of the country because digital natives prefer buying products online and doing daily activities online as well.

In Thailand, actually, we watch the news from social media: Facebook, Line, Instagram, etc. All of these are the top hit media. Twitter may not be so popular in Thailand as these three. Still, we are one of the leading countries in the world that use online media. Whenever a new technology is introduced, we will always be the top users who like to try on new things. Besides, after using it, it goes widespread quickly as one forwards to others very quickly. Thus, anyone who does not use it seems to be outdated or unfashionable. E-commerce in Thailand is rated on top, especially when compared with the proportion of Thai population. In each country now E-commerce overgrows and everything is sold online, i.e., Facebook Marketing, Line, etc. The more people use, the more quickly they grow. (Thitipong Nandhabiwat, personal communication, February 27, 2018)

Besides, the use of digital media by one's interest, the experts further viewed that digital natives' use of digital media for facilitating education is another personal use among digital natives. Possibly, the reason is that most digital natives are

at the studying age, so instructors need to adjust their teaching following digital natives' behaviors.

From my point of view as a teacher, now the internet is the instrument that is close to students the most. Everything is in one mobile phone. On the contrary, it means danger comes very carefully to them as well. However, it's good that many websites were blocked by the Office of National Broadcasting and Telecommunications Commission (NBTC). Consequently, children's use are limited at some levels. Still, some parts of the internet can even reopen themselves in spite of being blocked. Since the instrument is so close to them, but the learning process does not try to reach them, it turns to be that we teach them on PC, but they play their mobile phones. Therefore, both sides cannot be adjusted towards one another. Accordingly, in this era where social media obsesses the world, schools need to know how to use them. At present, many teachers do not teach by PC, but they let students learn through Facebook and use Line for communication and coordination. In these online media, both teachers and parents are included. Consequently, shared learning between teachers and parents is created. On the other hand, it can control students in the class. For example, at Suan Kularb (Nonthaburi) School, every classroom uses the same structure where Line is available for both teachers and parents to control and manage students' behaviors. Parents can know the kind of assignment and when their children have to submit their homework. For students, they can use online media in many subjects, such as for survey questionnaires, students can use their mobile phones to collect and analyze information while it can also save the paper as photocopying is not needed anymore. We can use the internet and ask our students to check their answers on the phone or their tablet. All work process is finished in one instrument. In short, in the teaching process, if we use social media and network, it helps our work faster. On the contrary, if we don't use it at all, students and teachers will go in a different direction. Explicitly, teachers teach on PC while students learn on mobile phones. (Jirat Jaemsawang, personal communication, March 1, 2018).

Regarding digital natives' pattern of media and media content exposure, digital natives do not have fixed structure nor design. Each of them may have different and unordered media exposure and media access behaviors.

We have to admit that children nowadays are unstructured. In other words, they never do things in order or in a systematic way due to the fragmented nature of media, which is so plenty that sometimes they don't know for what they want to look. Anyway, they are still addicted to Facebook, Twitter, YouTube, IG, or all kinds that have AI, which is very smart. Adults don't understand. Children can't get out of them because once they enter to view E-sport from Facebook or YouTube, all information on sports has already been fed. Thus, children can get all the information they need while their attention is deeper and deeper until they can't keep their eyes off. Anyway, sometimes they do not stay still at any media or any web. They may read five lines of news and then view some video but not up to the end. It is why children's behavioral pattern is called "unstructured." (Settapong Malisuwan, personal communication, October 29, 2018)

Still, the experts gave an opinion that the skills of using proper digital devices to serve their needs, of interpreting and connecting information from the digital world, and of managing the received data to make use in their daily life of Thai digital natives are different. It may be another restriction for cultivating digital citizenship as well.

Of course, they know how to use technology, how to access it, and even what they should do but not all of them can do. Not everyone can select the right keywords to access the information and get what they want. Supposing that when I teach and ask two students to find one same topic, i.e., digital citizenship, two of them will come back with different resources. Why? They may have the same skill of using keywords but have different skills of acquiring information by keywords. One may download from YouTube and

know how to receive the information whereas the other does not know how to capture it. It is the skill of access and the skill of managing it after the receipt of information, including the skill of knowing how it can be stored or kept in their database. It covers all kinds of skills. If we ask what Thai children know. The answer is they know the technological skill or they can use the internet, but for using keywords effectively, it is still doubtful. Besides, they have different skills. Those who have English skill may be more advantageous because they can use both languages: Thai and English, which help them to generalize or access to resources better because they can change the languages interchangeably. At the same time, those who have higher skills in accessing keywords, they will know how to make their keywords narrower or broader. They will know that they have to go to this Forum or to this Chat room for obtaining precise information. Thus, you have to enter a specific room. If you search a keyword from the internet, sometimes it is tough to find the word, and probably you cannot find it. (Nudee Nupairoj, personal communication, February 21, 2018)

#### 4) Digital Natives in Thailand and Citizenship through Digital Media

From in-depth interviews with experts, most of the digital natives in Thailand do not understand their rights and duties according to the Thai Constitution clearly. From the concept of citizenship, firstly digital natives in Thailand have to possess three qualifications of citizenship: Responsible Citizen, Participatory Citizen, and Justice-oriented Citizen. The proper degree of these three qualifications of citizenship will vary depending on the contexts or situations. Still, Thai digital natives cannot balance the use of these three qualifications in various conditions.

These three qualifications are common in the citizenship and are used at different degrees depending on the situation. However, any of them should not be used so overwhelmingly that the other two are ignored. In general, if we cannot cultivate citizens to be responsible for themselves and for people surrounding them, to do voluntary public activities, or to help society, it is impossible to prepare them to be a justice-oriented citizen. If we cannot

implant the idea that society requires assistance, collaboration, and justice from us, their citizenship will not be fulfilled. These three things are not a separate track that we can choose one of them even though we may focus on one more than the others because in each situation it requires our actions differently and it is also based on our capability or role to serve each track. It is unnecessary that everyone has to choose Track 3 because in some situations, Track 1 is needed and Track 2 supports Track 1. Therefore, three kinds of citizens are not the division of track to be chosen. When applied these three kinds of the citizen with digital natives, I hardly see their actions in these tracks. For instance, you should not be a part of reproducing rumors. You must be responsible for yourself to know that this clip is not true and you should not report to others. Thus, you can create a bigger group against such rumors. In the real world, when someone writes a distorting article, you can write a responding article or gather a forum to mobilize about this. We cannot do the same in the digital world, but at least you are responsible and are not a part that adds more problems in the digital world. Then, you become a good citizen of the digital world, don't you? Qualification or action no. 2 can be combined with other actions in society to get more power. Action no. 3, under the role of group formation or the group of people who come to click on social media, can create a change depending on time, occasion, issues, and readiness of each person, which is not equal. (Athapol Anunthavorasakul, personal communication, January 17, 2018)

In comparison with Europe, digital natives also have not used digital media based on their digital citizenship so much either, and they often understand this meaning only in the dimension of their rights, which is not entirely correct either. Conversely, the digital world opens an opportunity for people to express their ideas diversely. In Thailand, social participation, the use of creativity for their citizenship, and mutual help in a society in the digital context is still relatively low.

We see a lot of people firstly using their citizenship possibility only for their rights. And we are seeing that not all people are using their opportunity

because they don't believe that they have. It's in that context, and the digital seems to offer new possibilities for connection and more skilled forms of participation and creativity and perhaps assistance. But online, we see a worsening of those problems. Many people use the Internet to support extreme right in activities, and many people pursue it. ...It's hard to call anything irrelevant but not political vision the celebrity vision, leisure, and luxury goods and mass entertainment, there are, absolutely the number of people who are using the Internet in the way that we hope for reflexive civic deliberation is few. That's a big disappointment. (Livingstone, personal communication, November 5, 2016)

Besides, it was found that in the Thai social context, digital natives have not used information in a useful way correctly. They do not understand the means for accessing information and verifying its correctness, including their roles of coping with the received data. Shortly, they do not know how they will use the information to be beneficial for themselves and the society as a citizen.

The significance of digital citizenship with which people have to involve needs to be explored deeper. For example, digital citizens have to know what they will use with the received information or what their roles and responsibilities are according to the specified or expected citizenship. If they need to get correct information, how can they acquire such information? How can they distinguish between true and untrue information? What is the meaning of the referred statement? Is it political information? Does it relate to society and to which dimension? All of these are digital competency, which is hardly found. (Nonthasruang Kleebpung, personal communication, December 24, 2017)

Furthermore, digital natives in Thailand were found to comply with the rules of the digital world at a low level since they perceive them as too complicating and complex. Thus, sometimes this causes some risks for themselves and others, i.e.,

a violation of copyright, stealing of personal data, dissemination of incorrect information that violates laws or ethics of the society.

Thai youths do not understand why the university restricts the database for student use only, why it requires log codes, or why general people cannot enter the website. I mean only some, not all of them. I synthesized from the findings from my focus group interview. They must accept the rules that come with their accessibility. What will happen if they do not comply? Hacking will happen. It's a risk that other people can hack the information if they know how to do it. Students don't know and don't accept why they have to subscribe for it. (Nudee Nupairoj, personal communication, February 21, 2018)

Sometimes, some bad experiences and mistakes are found in the digital world. Nevertheless, what happened to some digital natives help them to learn, correct, and adjust themselves, including being more cautious and aware without social cultivation.

I asked them if they ever experienced any frauds from an online purchase or they ever were reviled. They said yes and told that this made them more cautious. That is a part of the experiences digital users can learn. It helps to learn media literacy faster. Namely, it helps them not to believe things on digital media too easily; on the contrary, it induces a sense of skepticism or doubts and becomes a supporting factor for scrutiny before judging any person. (Nonthasruang Kleebpung, personal communication, December 24, 2017)



## **5.2 The Findings on Concepts and Attributes of Digital Citizenship Suitable for Digital Natives in Thailand**

In studying the concepts and attributes of digital citizenship suitable for digital natives in Thailand, the researcher divided the findings as follow:

- 1) The goals of cultivating digital citizens
- 2) Guidelines for cultivating digital citizens
- 3) The connection between digital citizenship and democracy in Thailand
- 4) Main concepts of digital citizenship
- 5) attributes of digital citizenship suitable for Thai social context
- 6) A synthesis of concepts and attributes of digital citizenship

### **5.2.1 The Goals of Cultivating Digital Citizens**

In creating the concept of digital citizenship, what should be concerned is the goal-setting as the core of digital citizenship by considering all concerned contexts and variables as aforementioned: governance system, support from the government, the meaning of digital media usage of digital natives, and citizenship through the use of digital media. Therefore, the set goal of cultivating digital citizens must be concrete, touchable, and practical. It should not be just a goal of creating awareness. Instead, it should be the creation of a citizen who can use his or her media for serving his or her purpose with responsibility, knowledge, scrutiny, and social participation, including who can express his or her ideas for social justice and who is ready for a lifetime learning.

What is our expected goal from digital citizenship? Citizens with a concern about their rights and their responsibility at the same time. The main core is self. If we are good men, we will conduct good deeds in the digital world. It's just that simple. What do we need from good people? Our destination is their development: development in governing themselves, in participation, etc. Thus, we must have a goal. People are not learned only for knowledge, i.e., studying to get knowledge for a future profession. If we stick to our future

profession only, it means we concern about our benefits. As a citizen, it means I can take care of myself, I know, I earn incomes, and then I have to play a part in helping to develop my country. The destination must be clear accordingly. Thus, what are the roles of citizens to achieve such a destination? If the goal is not clear, we will focus only on knowledge and on getting information, and we will never apply that knowledge for any use for society. If the social problem that we can see now is cyberbullying, but we only provide some knowledge to let digital users know what cyberbullying is to avoid future problems without letting them participate in solving the problems, that cannot help to develop the society still. Accordingly, we must have a clear goal of what kinds of characteristics and actions they should have and for what purpose. Then, we can evaluate what we want to see. Otherwise, we without knowing what to be evaluated. The definition of a citizen that we can achieve then will be simply a good citizen or simply a citizen who can take care of himself or herself only. (Nonthasruang Kleebpung, personal communication, December 24, 2017)

Besides, the goal of creating expected digital citizens who are responsible for using digital media for their survival in a society, it also covers the purpose of producing citizens who know their rights and duties or responsibilities and are well aware of their safe living in the digital world.

Digital Citizens have to survive in the future world. They have to survive well in all aspects and will not be victims; although, the world is harder to survive. Just posting on digital media is hazardous already. People know where we live, what our house contains, etc. Some people may not concern about this, but it is still risky. The word “digital citizenship” will remind them that it means digital survival. Digital citizens must know their rights and responsibilities, optimize their digitalness, and have an awareness for their survival. Besides, cyber scrutiny must be included. (Thitipong Nandhabiwat, personal communication, February 27, 2018)

### 5.2.2 Guidelines for Cultivating Digital Citizens

In creating digital citizens, as inner cultivation, guidelines should be easy to access and stimulate an intrinsic motivation, i.e., to allow them to have social participation, etc. It is essential to cultivate digital natives as digital natives are the core human resources in mobilizing the growth of the country through the use of technology. To create them to be manhood is very significant because at present people do not participate in any activities in the physical or real world or have less human contact than in the online community. Consequently, they may have no consciousness of the love for their community since they never attend in any activities in the physical sphere and this may affect their awareness towards the love for their nation as well. Besides, the quality of habits, actions, and consumption patterns impact the ecology of digital context and communities” (Suriyadeo Tripathi, 2018)

From the in-depth interviews with experts, digital natives understand their roles as a citizen superficially; however, these people still have power and creativity in driving society. They have not been socialized or cultivated to have a sense of belonging to their nation so much. Hence, the more authorized social participation by listening to and adopting digital natives’ suggestions as citizens should be considered and applied in all concerned systems in mobilizing society. It is thus a significant force in helping to support the establishment of digital citizenship of the nation.

Because, youth, they have energy and they could think differently from the tradition of the society, but they don’t have the experience of the society. The youth don’t always think about those who are not speaking or who are not heard. The youth don’t necessarily have the keys to being heard. So the skills of influence are also important for citizens. And what they have often is the skills of creative enthusiasm but not of being heard and then they are quickly disillusioned because they are not heard. “we made this website with our views, we expressed ourselves as our rights, and nobody changes anything,” and this is the cry of young people. And what anybody older knows it takes me for the skills really to work with the system and to... Some people think citizenship means revolution from outside and there are those who believe it

means a change from within. (Livingstone, personal communication, November 5, 2016)

In brief, regarding guidelines for establishing digital citizens, two directions should be concerned: 1) the instructions in nurturing, bringing up, and cultivating digital citizenship or what kinds of characteristics of Thai expected digital citizens should be created or enhanced for a co-existence in digital community and 2) the guidelines in installing mechanisms of protecting digital citizens. In doing so, social structure or the tools and rules enabling a safe and peaceful co-existence in both physical or real and digital world should be concerned.

There are two things to do. The first thing is how to groom digital citizens. In the world of digital citizenship, what are the protection mechanisms? There are two mechanisms: ‘people’ or how to cultivate people who are born and brought up in the digital world to live in a society and ‘social structure,’ which covers the issues of mechanisms and rules for a co-existence. For instance, what you are working on now deals with how to groom people, but another part covers the strategies for protecting them, for promoting them to access online more effectively. It is to create suitable surrounding for them. We have to know first what kind of knowledge they want to know, what their needs, in terms of learning space, resources, human resources, and learning process, are and what the related laws they should know. Some laws relate to them directly, some to media producers, some to the punishment, and some to the woven network. It is the creation of the world surrounding them. (Athapol Anunthavorasakul, personal communication, January 17, 2018)

Nevertheless, in establishing the guidelines of creating digital citizens, the equal-readiness preparation for Thai people at all levels should be concerned, including channels for driving and supporting the training towards practical accessibility to people through education. In Thailand, Thai citizens are required to start their learning when they are aged no older than seven years old and finish school at least at the first or lower secondary-education level. This compulsory education is

a part of the primary education system, which is divided into six years of elementary education and six years of secondary school. (Office of the Basic Education Commission). This period of education falls under the range of ages of digital natives. Besides, education is also a core value in Thai society. Correspondingly, the creation of digital citizens through education is one of the active channels, but some other channels that match with Thai digital natives' behaviors and lifestyles should be added. From the focus group interview with Thai digital natives, the digital natives expressed that Thai society focuses on formal education with an expectation towards higher education and better future profession subsequently. This kind of value puts pressure on digital natives significantly. On the other hand, digital natives aged 15-24 years old need some other informal activities for their learning. Therefore, it may be challenging to cultivate the desired content to digital natives through formal education. Instead, the provision of needed information through an informal education via an open channel with easy-to-understand content should be conducted in parallel by educational institutions.

Of course, people's readiness should be prepared. If we talk about knowledge and understanding, it involves education, which needs to be raised. Digital citizenship and education are related as both allow everyone to access education equally. However, it is not necessary to sit in a classroom only. Now, it is even more open for anyone who wants to study. They can sit in a classroom and graduate with a certificate for that subject, or they can combine many subjects, either in classroom or online, together until they can reach a high vocational certificate or degree. The future trend will be more or less like this surely. Still, all of these need to be prepared and promoted, especially the disadvantaged group of people. The educational institutions should concern about this group. (Thitipong Nandhabiwat, personal communication, February 27, 2018)

### **5.2.3 The Connection between Digital Citizenship and Democracy in Thailand**

Concerning digital citizenship, the governance system of the country should be considered as it is a foundation of it. The advantage of digital citizenship in Thailand is that Thailand is governed by democracy, which requires people's involvement and participation, so it is easy to develop digital citizenship. In a democracy, everybody has an equal right to access information. The platform or the government's regulatory system that supports digital citizenship is a way of freedom, but it does not involve only the accessibility of information, but also the responsible use of media, and mutual respect. Other types of governance system may not facilitate the creation of citizens in this form.

There is something we have to look in parallel to digital citizens, and that is the space on the digital world. I think there should be three kinds of citizenship: digital citizenship, democratic citizenship, and neutral citizenship. We have to clarify what these three kinds of citizenship are. In the digital world, it calls for democracy because everyone is equal without hierarchy or anyone higher than or superior to others. The platform that supports digital citizenship must be democracy-oriented because it means accessibility, the responsible use, and respect. For other kinds of the governance system, it may not facilitate to create citizens like this. For instance, some countries may block people's access so we cannot call this as digital citizenship due to the accessibility limit for applying information for use. (Athapol Anuntavorasakul, personal communication, January 17, 2018)

Besides, the government's regulatory system enhancing the equality among people of all levels and classes for accessing information by freedom, the management of digital possibilities to fulfill people's rights according to democracy is another essential thing for the creation of digital citizens as well.

All people of all classes and levels who can access internet network can be included in the concept of digital citizenship. There is no limited line for

digital citizenship. Digital citizenship does not cover at the moderate and higher level, but all levels. At present, almost all people have basic digital devices or, namely, mobile phones, which can be connected to the internet. They can use their digital media for doing some transactions or calling for any services. It is a fundamental concept of digital citizenship: equal rights to access information. However, government offices are important agents to make this concept accomplished. Our country is during the stage of adaptation. Very shortly, we will use only our ID card for all government and other digital services. We don't have to take any other cards with us like in the past. All offices are digitally connected. In the past, when someone wanted to apply for a job, the recruitment office had to check for his or her records, i.e., criminal records, etc. In the future, all of the information can be checked across offices. (Thitipong Nandhabiwat, personal communication, February 27, 2018)

#### **5.2.4 The Core Concept of Digital Citizenship**

For constructing a concept of digital citizenship, it is essential to consider social context and situations relating to the digital context of each country because each country has the different social condition and digital location, which affects the construction of concepts. In each country, the pattern and characteristics of expected citizens are different. Furthermore, the social and digital context of some states may facilitate an active creation of digital citizens while some countries may not be ready for it due to technological gaps, the restriction of people's political participation, or different policies of the country. Accordingly, each nation has to study its context and design the concept of digital citizenship appropriate for their social context.

One of the things I'm thinking is that concept of Digital citizenship is hybrid. So apparently we need to think of what do we imagine the possibility of digital, but also how do we guess citizenship. And what striking for citizenship in the country in different places. In different parts of the world, in some areas, citizenship is in strength in some places, and it's a crisis in some places. Young people are either ignored or hoped to invest in that, so the relation of young

people to citizenship is already contested. So they think about Europe and Europe we have I believe a vibrant concept of citizenship. We expect people to participate not just by voting but also through all kinds of conventional means of communication and mobilization. We have a reasonably wide tolerance for forms of assistance and alternatives. (Livingstone, personal communication, November 5, 2016)

Besides, since the concept of citizenship and digital citizens are connected, digital technology plays a role as an instrument helping to widen expressions of people as citizens. Digital context thus has a vital role in promoting a full citizenship.

The conditions of citizenship are what sets the possibilities for the digital. But there is no question that I think about the locals where people live. If you are the person, you want to fight for the voice of a particular minority or the rights of the disabled. And you are the only person in your neighborhood, but the Internet creates a broader community. That is radically new, and then that is very exciting for new kinds of voices. That's one concept of digital citizenship. It's to teach young people and give them that power. But still, the institutions of power must listen. Otherwise, we have a lot of voice with no hearing. (Livingstone, personal communication, November 5, 2016)

The most crucial essence in the concept of digital citizenship is “manhood” which is the essence of human ways of life. As human beings, people should express their manhood righteously either in the physical or online world. For an expression of humanity, the following aspects should be shown: (Suriyadeo Tripathi, 2018)

- 1) Morality
- 2) Public Mind
- 3) Responsibility
- 4) Disciplines
- 5) Creativity
- 6) Inspiration



Therefore, the central concept of digital citizenship ties with the practices in the digital world, which also reflects appropriate social practices in the physical world as a citizen of the nation and the world while maintaining one's own identity knowingly but adequately. Accordingly, digital citizenship should emphasize on people mainly, but the concept will be a framework for proper practices in the digital world.

Digital citizenship focuses on people, but it also covers the environment that facilitates their living in the digital world properly. For me, the bigger word than "literacy" is "education." It is important to educate people about what is under the concept of literacy. First, we must educate them on how to access common rules with which they have to comply. These two things are under the same theme "Living together in the Digital world concerning rules and laws." Next is the matter of their use of digital media of communication. They must catch up with the marketing mechanisms that will always stimulate our desire to participate: to use, to share, and to pay. Therefore, responsibility, manner, laws, etc. are all under the concept of digital citizenship. (Athapol Anunthavorasakul, personal communication, January 17, 2018)

Furthermore, the central concept of digital citizenship is based on the ethics of co-existence in the physical world, or people have to concern about the consequences that might make other people in trouble or cause damage to them.

In using online media, it is similar to our usage in the real or physical world. If we think that to stab or kill someone should not be done in the physical world, we should not do the same in the virtual world. Likewise, we should not lie or deceive other people through our writing in the media as well. (Nudee Nupairoj, personal communication, February 21, 2018)

Besides, digital citizens should be active learners who know how to use digital devices and digital systems to serve their maximum benefits with public concern.

To be an active learner is vital for Thai children. If they are active learners, the room will be silent when a teacher teaches but will be loud when a question is asked. On the contrary, in the Thai classroom, while a teacher is teaching, they talk loudly, but when the teacher asks them a question, they keep silent. It is not an active learner, so they must adapt their roles to be active learners. Once they become active learners, then everything will be, and others will follow (Jirat Jamsawang, personal communication, March 1, 2018)

Besides, digital citizens should sacrifice and devote themselves to society as a citizen of the nation, of the world, and the digital world.

We must be ready to learn and prepared to learn with others, including inspiring others. We should have networks for our contribution. However, we might have to redefine the term of social participation. Can social contribution be in a political, social, or medical context? What level of society do we want to make our contribution? At the societal level, national level, or global level? How broad is our definition of social participation and digital citizenship? (Nonthasruang Kleebpung, personal communication, December 24, 2017)

Besides, in the capitalism condition of Thailand, the concept of digital citizenship should accord with the readiness of people and profession-skill practices in which the use of digital media can serve the full benefits. This skill is necessary for an entrepreneur to survive in the digital world.

Somebody from across Latin America. And she was talking about giving kids entrepreneurship skills. But my God, she was describing, particularly working with the disabled kids where they needed some skills to get them jobs. They know how to produce a CV, and know how to appeal to the applier. Yes, let's teach some job-ready skills. That also is some point of digital citizenship. It's the capital influence, and they need this. We are in capitalism. (Tyner, personal communication, November 5, 2016)

### 5.2.5 Attributes of Digital Citizenship Suitable for Thai Social Context

From the interview findings, the researcher organized the attributes of digital citizenship suitable for Thai society gained from the statistical analysis in relations to digital media usage behaviors as follow.

#### 1) Digital Literacy

Digital literacy means the analytical use of digital technology for receiving and transmitting information by always concerning about its effect on oneself, others, and society with discretion, which leads to social expression and participation in digital society towards the beneficial changes for the nation.

It is a matter of skill of media literacy. The important skill is analytical thinking before any action. More specific probing should be considered, i.e., for what purpose is the information used? Towards expected citizenship, if someone wants to acquire correct information, how can he or she acquire such information? Can he or she distinguish the received data? What is the information that he or she mentions about? Is it political or social or what? All of these questions require some kinds of competency. It is analytical thinking and media literacy. (Nonthasruang Kleebung, personal communication, December 24, 2017)

Nevertheless, digital literacy requires consideration on various dimensions besides content and sources of information. The analysis in using techniques for constructing knowledge is also another essential skill of digital citizens since it helps to distinguish which information is factual, and it helps to promote the creation of aesthetics. Therefore, the concept of digital literacy should be open and not focus on content literacy only.

Supposing that this is raw data, how can you screen it knowingly? Which approach will you use? What kind of approach will you use to verify the true information or facts? For instance, through nonverbal language or content? Supposing that we see a piece of a poster, is the size of letters, type of the font or the color used, etc. counted as media literacy? I think so. However, if we

focus that media literacy is only information literacy, we will then ignore some techniques conveying the meaning of the message. Thus, don't look at only its definition but also its main concept or the approach that helps to promote our media literacy. (Nonthasruang Kleebpung, personal communication, December 24, 2017)

In brief, digital citizens should possess the following competencies related to media literacy. (Hobs, 2010)

- 1) Knowing how to acquire the correct information, i.e., the use of devices or software for proper access.
- 2) Analysis and interpretation of digital data to respond to the desired utility.
- 3) Evaluation and classification of information for the appropriate application.
- 4) The adoption of useful details through proper digital devices to contribute valuable participation for oneself and society.
- 5) The induction of creative changes that are useful for the nation through digital media.

Among these competencies related to media literacy, some essential skills should be implanted for digital citizens towards efficient media literacy. Therefore, to develop active competency development, it is crucial to analyze the level of media literacy of each target digital citizens, including the problems that obstruct the skill development for them.

We promote media literacy as we want to create citizens who have analytical thinking and social participation. However, for developing media literacy, the obstacle is the different levels of media literacy among people. Some people know all and can tell us what kind of approach they use to analyze this or that. However, it is just a knowledge level but has not reached the action level yet. On the other hand, if we have training or have to teach a new beginner, we must start with providing the basic knowledge of what media literacy is, what they should know, and which skills they should have. The ultimate skill is the

ability to create some message or to express their opinions. However, generally, Thai digital natives have not reached such ability yet. They cannot appeal to the problem they face. For instance, as a consumer, when one knows that the product is not right or the acquired information is not correct, but he or she does not express his or her problem. Then, it ends. If this kind of people live in a society that we expect them to appeal or help solve problems, but they will not do even this small thing. Then, what will our society be? They may not even know how or where to appeal. They do not know either that they have a right to do so as a part of society. Thus, media literacy cannot reach the level to make changes to society. To know their level of literacy will be a way to help develop their potential. (Worawoot Ounjai, personal communication, January 17, 2018)

Besides, the implantation of media literacy concept, the concurrent consequences caused by people's media literacy as digital citizens should be emphasized. In other words, Thai digital citizens should know to make use of their media literacy and their full potential for society.

Media and information are connected and so is media literacy and information literacy. Suppose that we watch TV, we might focus on whatever we define as "information," i.e., information processing, then we will focus on the provision of information. Thus, the main concept is not to distinguish if this is media literacy or information literacy. The main focus should be the ability in analytical thinking. Therefore, to distinguish types of literacy is trivial, but the essence is analytical thinking instead. If people can think, they can think of anything. However, it also connects with another important thing, namely the concept of citizenship, and how to mobilize this citizenship. When we talk about citizenship, it will tie with the government system and societal system which is a large structure. If people understand their citizenship simply as a boy born in Thailand who knows how to play his internet or to access the information, then the meaning of digital citizenship will not cover his social contribution. Thus, it means that in the definition of digital citizenship, we

must tie it with the concept of public concern somewhere. It is at the societal level. Then, we must also include the dimension of social justice in the definition of digital citizenship as well, and this involves politics. We have to concern about how to participate in helping to solve the problem of society correctly. It is then not just to know how to enter sanook.com for sure.

## 2) Digital Communication

For digital citizenship, communication through digital media needs to be transmitted accurately and effectively to achieve the intended goals. The content in contact through digital media should be creative while the proper and suitable channel and the digital device should be selected, based on the public concern mainly. Self-restraint and care of the possible adverse effect of communication caused by digital media are vital.

There's a word for the 21<sup>st</sup> century saying that communication includes communication as a good citizen. It is not just to communicate what we want to say or what we think. It is not simply to write whatever we want to write. We have to think and write positively, not to communicate to make a quarrel. If we have good computer skills, i.e., Facebook, Line, etc., everything will turn good. Therefore, what I expect is to see students have good communication skills as a good citizen. If they have to present themselves in digital media, what should they emphasize? It's their ethics in that presentation. Everything we write in there is ourselves. Therefore, we have to talk more about this issue. (Jirat Jamsawang, personal communication, March 1, 2018)

In digital communication, including a participative communication or the creation of content for changing society in Thai context, it is crucial always to realize that such disclosure is beneficial for the public as a whole, not for the benefits of only some groups in the society as it may cause a long-term effect.

Thai people are kind and generous. We like to help, i.e., lost children, an admiration for good people, etc. We think that this is a part of social contribution. However, the context of using social contribution adopted from western culture might be different from the Thai context. The western people may hashtag in their ways that are different in the Thai context. Its function is different. For western culture, in terms of business, hashtags may have a purpose at the global level, i.e., CSR to show their social responsibility. If most people post something and then hashtags, a hashtag means a fragment of one's thought to explain what he or she thinks. These fragments intend to be combined with moving the world. For Thailand, most hashtags are not for business purposes. Normally, social contribution may be used for mobilizing people to do something or to change something together through digital media, i.e., Hashtag, or social media, i.e., to issue some laws, etc. Accordingly, we have to see for whom this movement is, for the country or only some groups of people. This movement can be called social contribution or participative communication, but not necessarily as a digital citizen. If you join in digital media to make more fair laws for the majority of people, it's ok. However, if you want to amend the laws for only some people, it is not fair. Therefore, we have to think before you will do anything in digital or social media. You will not only think that this is a social issue and if you want to correct anything, but you also sign to agree. It might be for too specific or personal purposes. (Nudee Nupairoj, Personal communication, February 21, 2018)

Besides, it is essential to understand that in digital communication, the diffusion of information will be very rapid like Virus diffusion or the data can be connected and transmitted without time and place limit. Therefore, to communicate anything, a scrutiny and thorough screening for factual information should always be concerned. Sometimes, even information with evidence in the digital world may not always be correct. The negative effect might cause a negative impact on others as well.

The other thing I wanted to talk to you about something called the cascade effect which is another constraint. Because as all these bullies, I don't believe, you know, what do you call of this shaming, harassment or victimization? And if you've ever been in high school, you know what that is. But this cascade effect is dangerous too even if it's not negative. It's like, you know, it's like it starts with something like, maybe, a health communication issue, like vaccine cause Asperger or something and then it starts to become viral. And, so, the cascade is a set of the big issue that the actual evidence and destroy for the public. (Tyner, personal communication, November 5, 2016)

Therefore, to protect the world of information from being the world of miscommunication, the development of the skills of analytical thinking for communication is vital as now we face the information society in which lots of various sources are claimed, compared with the past in which we had only libraries, encyclopedias or newspaper.

So the world of information turns out to be the world of misinformation. We need to train young people. Young people need to become so much more critical. More critical than they needed to be before. Because before you went to Times Newspaper, Encyclopedia or the Libraries and that was about if you were searching for information. And now you go anywhere. (Livingstone, personal communication, November 5, 2016)

### 3) Digital Commerce

Digital commerce means the use of digital technology for doing business transactions and online purchase of products, including the entrepreneurs' use of digital channels for their business. Digital citizens who are service-users need to know how to use it and how to verify all received information from both service-givers and entrepreneurs. Enthusiasm should be enhanced to call for and verification of information under the strict surveillance of the government to avoid being deceived or cheated should be conducted.



Users may get involved easily with any transaction. People do not have so many choices as the information is allocated by the government. If the government does not allocate any information, then how can it get the information? Therefore, users have to know how to call for information from commercial parties. For instance, if we want to buy something, we have to know who our seller is, if the seller exists if the entrepreneur is credible, or how many people the entrepreneur has cheated, etc. Besides, users must be aware of not giving their identity information to anyone while they need others' information before doing any transaction with them. (Worawoot Ounjai, personal communication, January 17, 2018)

Furthermore, the government should issue a measure to monitor the digital transactions strictly, starting from equipping users with digital-commerce knowledge suitable for each range of age by connecting them with the entrepreneurship skills and consumer protection. It can implant good attributes of digital citizenship as both the users of digital commerce and as digital entrepreneurs.

Children should learn about E-commerce since secondary school. Some people can get rich now if they know how to use it. Those who can use it first or quickly will get rich before others. It is true. Who knows first gets first and who is quicker is richer. It is also true. However, in our society, a lot of people use their expertise to cheat other people. Therefore, should the government do something about it? The government should let E-commerce be operated under the monitoring system. Otherwise, it may be too damaged to be fixed. Then, sellers who used to sell things online cannot sell those things online anymore because buyers don't want to take a risk. Thus, if children are taught about this at an early age, they will learn how to buy or sell things online safely. Children should have some foundation to be a wise consumer of digital commerce. Personal information or privacy of digital commerce should be taught a long time ago. (Jirat Jamsawang, personal communication, March 1, 2018)

Nevertheless, digital citizens, either as service providers or as entrepreneurs, should respect the rules and conduct business with honesty and responsibility, including complying with ethical codes and laws related to E-transactions and E-commerce. On the other hand, the government should clarify how to make use of the database for entrepreneurship so that entrepreneurs can comply with the requirement of E-transactions and commerce, which can stimulate national economic in another way.

E-commerce should be registered. It is essential for people nowadays. Whoever conducts an E-commerce must sell his or her products or service under the registration. In Thailand, we get many verification problems of E-commerce, i.e., no verification of income or personal data of sellers or buyers to avoid cheating. However, accessibility to someone's personal data is also risky. Once personal data can be accessed, it can be used for any purpose. Therefore, it is essential that the government or government offices have absolute power and be very trustworthy. Otherwise, people will not comply nor cooperate. If they want to do an E-commerce, they must comply with the requirement. (Worawoot Ounjai, personal communication, January 17, 2018)

#### 4) Digital Etiquette

Digital etiquette means the use of digital technology with proper manner, politeness, and creativity without leaving any inappropriateness in the digital world, i.e., not hurting others' feeling, not damaging others' identity, including having suitable manner in using any device that may affect social expression in the physical world.

Children of the new generation like to say what they think right away, so it is quite hard to control. Therefore, they say it before thinking and then share in the digital world without thinking. Thus, when they want to tease their friends, they show it on the internet or digital media instantly. Accordingly, we must cultivate them to think before saying and to organize their thought too. Some children like to speak loudly and use a mobile phone in class. Sometimes, they

talk outside class without listening but focusing on the screen only. We have to be very serious and strict about this. No compromises. The consideration for others seems to disappear from Thai Society. (Jirat Jamsawang, personal communication, March 1, 2018)

In using digital devices for communication, one should concern about forwarding some messages, especially about forwarding or sharing that suits for the specific receivers. To transmit any message without adverse effect on receivers may cause miscommunication and communication failure, i.e., to share some information that is not relevant to the communicators. Instead, this may make other people in the group miss some relevant information that might be more useful for them.

What I want to see is people can use effective communication channel or can use it correctly. Mostly, Thai people often use digital media without digital etiquette. For example, they use the line as a channel for working in a group. However, some people share whatever they want to share, which is irrelevant to the group task or which is an inappropriate message. It also makes us know more than what we should know. Some important message of the organization may be missed because when people like to keep updating foreign matters. Consequently, when other members see a junk of message, they skip or ignore what has been transmitted to them. It then causes a lot of damage to the organization so digital media should be used properly to serve the right purpose. (Thitipong Nandhabiwat, personal communication, February 27, 2018)

Besides, one should realize that to share information on the internet cannot always control other people's privacy in spite of some protection mechanism. Therefore, one should not share any incorrect information that might damage other people's reputation or welfare, both physically or mentally. One should also be aware of sharing information with some creative digital footprint that might be useful for others and society.

You have to think that space on Facebook is not your personal space that you can share or comment anything to bother others' living, reputation, safety, or peace, both physically and mentally. It is legally stated that you cannot say about or accuse of anyone, or post any content that violates his or her privacy. You cannot post a personal story carelessly in public space since you also have hundreds or thousands of network, and those thousand people can all see that story. (Nudee Nupairoj, personal communication, February 21, 2018)

Moreover, the conservation of Thai core values is considered important, especially the value of paying respect to the elder or hierarchy value and the value of giving high importance to family institution. These values are decent values and considered as a foundation of the respect for others, of generosity, mindfulness, and the mutual respect of one's rights under a democratic society, which can be applied in the digital world.

The respect for the elder is a good value in Thai society, but we have to use it properly. In foreign countries, they don't have such value nor do they give high importance to family, especially for the extended family where parents and grandparents live together. However, it is regrettable that such value is decaying. The reason why it is decaying is that Bangkok's living condition is more or less like that of western countries. A lot of condominiums emerged. When condominiums come, the size of the family is smaller, and this kinship disappears. These good values can be applied in the digital world, i.e., as people say, 'before doing anything, think of your parents.' It can also be adopted in the real world. (Jirat Jamsawang, personal communication, March 1, 2018)

##### 5) Digital Access

Digital access means the ability to access digital technology (technological infrastructure) sufficiently and adequately in terms of digital devices and all facilities. Part of digital access can be duly provided and widely by the government for equality in society. However, at the same time the government needs

to provide clear necessary information to assure people that they can access digital technology widely in both urban and rural area for their uses as national citizens, which has to start with the readiness of technological infrastructure, i.e., connecting networks, stable network integration for public service, etc.

“There are some types of people who are ready to adopt it. Still, a technological gap exists. For these people, what should they prepare themselves? It may be the problem of upcountry people, but they have to adjust themselves. A majority of their people may not have a chance to access it yet. The government also has tried to provide WiFi for every village, i.e., Net Pracharat, all through the country; however, it has just been started to be used this year. The government thus must find ways to push and make people understand this. (Thitipong Nandhibiwat, personal communication, February 27, 2018)

To build an understanding on the usage of information through digital system operation and the infrastructure of digital technology prepared by the government, i.e., the use of database from ID number to obtain all governmental welfare and services, is access connected from physical to digital world. It can decrease the technological inequality in some ways. Hence, the government should promote the understanding of these benefits to create people's right attitude towards accessing the state service through digital system operation. It is a part of developing the digital society of Thailand.

We can start with our ID card. Our blood group is a kind of data that can be tied with our ID and our tax ID ties with our ID card. Just mention about tax ID. It is a big issue already. Do we have all the TAX ID of everybody? If one of the components of digital citizenship is TAX ID, but a person does not have his or her TAX ID, can he or she be a digital citizen? Then, inequality turns back again. Therefore, the state should not make digital citizenship to be another inequality in society. If you provide facilities to digital citizens who tie PromptPay with their ID card for payment, the question is how much

people know about PromptPay. People should know and understand it genuinely before accepting its use and access.

Consequently, the government sector should allocate WiFi widely, manage infrastructure, and localize the policies.

“Access? Yes, we surely can access the information we need, but it's quite too expensive, and the quality is not so good either. It depends on NBTC, AIS, DTAC or TRUE. Maybe the government can try to provide free WiFi. Wireless or 3G is still too expensive, but we have to use data all the time. (Supinya Klangnarong, personal communication, October 26, 2018)

Besides the support towards the accessibility of service through digital infrastructure, the provision of an opportunity to access all kinds of activities to help mobilize the society through digital media is another essential thing to enhance full digital citizenship.

The more the social activities are digitally mediated, the more it is a form of inclusion to have the skills to join that, and the more it's a form of digital citizenship. (Livingstone, personal communication, November 5, 2016)

Besides the state's support of accessibility to digital technology, people themselves should know the objectives for accessing such technology clearly and thoughtfully for full use that will be beneficial for themselves and their society.

Once we can access physical equipment, we also must know what we are looking for from such equipment. Suppose that we want to enter the internet, we must know which keywords we should use. It is the skill needed in parallel to the accessibility. It is not just to pick up a computer, plug it, and then connect for some websites. Most people will understand that the process is just like that. It is not. We have to know what we want and which word we should use. We have to know that this web cannot be accessed, this one we

cannot copy or upload or we know that it is an illegal download. To copy someone's work on our paper without citation is illegal and unethical. It is what children have to learn. Most people will not think about this. They focus only on tools, but access is not just a tool. It involves rules, regulations, and laws, including our ability to identify what we need, to know the right way to search for it and to specify if such information is used. The access is not to hack information. All of these are included in the word “access:.” It is apparent that general people may know how to use tools, but “access” is not just a tool but involves morality while using as well. (Nudee Nupairoj, personal communication, February 21, 2018)

#### 6) Digital Laws and Ethics

Digital laws and ethics mean the use of digital technology ethically and legally that is beneficial for the users themselves, for others, and their society. The relevant basic laws and ethics digital citizens should know are copyright law, consumer protection, computer act, human rights, and media ethics.

Users may not know much about laws and ethics, and they may feel it is unnecessary to know them. However, there should be some mechanisms to protect them by the state. The state protects them and simultaneously enforces the service providers. Service providers and entrepreneurs have to register their E-commerce by using just their ID card and paying one hundred baht at an administrative district without involving the tax issues. Still, they do not comply to do so. If they do, they can get an E-commerce number to show to their customers that I have registered an E-commerce already. (Worawoot Ounjai, personal communication, January 17, 2018)

At the same time, the state should manage the issuance of laws and requirements and enforce them seriously to support the creation of complete digital citizenship.

Regarding problems of online media, there have been so many parties involved, but it is not so clear. For instance, are E-commerce problems the responsibilities of the police or can they arrest criminals of digital media? Does the Ministry of Justice involve since it issues the laws? If the problem takes place abroad, does the Ministry of Foreign Affairs involve? Then how about the Ministry of Commerce or Ministry of ICT? They are all involved. However, when we want to do something, we have to talk to each office or Ministry so our work cannot go on because we cannot do anything about online through each office at a time. If we look at the model of the Republic of Singapore or Korea, they have the Ministry of Online under the control of their Prime Ministers or Presidents because they need someone who has absolute power to make decisions and control the laws. However, in Thailand, the state is responsible for determining the rules and for solving people's misery and problems. Therefore, if anyone buys something online and is cheated, that is his misery. Thus, the state is responsible for protecting him from being cheated. It must identify what kind of information a seller has to tell a buyer. It is a rule or regulation. However, the problem of Thailand is we have law enforcement of laws. We have all the rules, but they are *never* enforced. We need no more rules but need serious enforcement. (Worawoot Ounjai, personal communication, January 17, 2018)

Furthermore, it is recommended that the laws and ethics relating to co-existence in the digital world be contained in the textbooks or educational curriculum to increase people's awareness of these laws. Furthermore, methods, procedures, or steps of legal actions, including contact channels should be suggested so that people can apply in their daily life when facing such problems.

This is essential. In next semester, we will revise our curriculum by adding the content about these laws on the internet, including the issue of a single gateway, which is the current issue now. We are asking students to define the meaning of it. Then, what are the points of blaming the government for this policy? If the single gateway is constricted at the middle, then it is not



workable. However, if the gateway is big enough, then the process can go normally. However, everything needs to be screened. If not, the kids cannot survive. Still, the screening must serve some purposes, i.e., for making it better, but the screening must not cause a slower flow of information nor makes the gateway too small like a needle hole. These are what students should be taught and learned to avoid some misunderstanding or believing in some deceptive words. They have to know these. (Jirat Jamsawang, personal communication, March 1, 2018)

#### 7) Digital Rights & Responsibilities

Digital rights and responsibilities mean the use of digital technology by knowing the limit of their rights in social media and by being responsible for not expressing anything that violates others' rights and privacy. Concerning their right of free expression, it is also the most important thing of digital citizenship and accords with the fundamental principle of citizenship in general. The awareness of one's a free expression with a concern of human rights, privacy, and the respect of people's diversity is essential but difficult to do, especially the protection of one's privacy to avoid personal risks in parallel to the respect for others' privacy. Personal data should not be posted or transmitted without permission, and it should be aware that any digital expression always requires a digital footprint. Accordingly, digital citizens should be ready to be responsible for their mediated expression whenever it affects others' rights and privacy or when it yields any negative consequence, either intentionally or unintentionally, to society. Consequently, it should always be aware that situations in the digital world cannot still be controlled.

Digital citizenship covers the freedom of rights and responsibilities. Freedom must come with responsibilities. According to basic human rights, every article mentions about responsibilities. Article 19 of the United Nations also specifies them. However, in terms of media, people have to understand first media literacy. First of all, you have to understand that social media is not a personal space and it is not just a medium, but it means the whole world without absolute privacy. Even you set the privacy mode; a privacy does not

exist. If you set it for only your friends, when your friends see, they will set it as public. When they share it, will it go? Yes, it will. Therefore, we must cultivate a respect for others' rights. Rights are another important thing in digital citizenship. Even access to online information, which is untouchable, you still have to respect it. Don't forget that though it is true that you have a right to access any information, and others also have their rights as well. It is the basic principle of digital citizenship or respect for one's rights and others' rights. In exercising your freedom and human right, you must not disturb others' rights either. I don't think Thai people are mean, but we are just not aware that what we are doing is not right. We also forget that in the internet world, there is no privacy. Not only do we share a lot of information, but news agencies also share it. All of this involves the consequences of what we do or what we call responsibilities. (Nudee Nupairoj, Personal communication, February 21, 2018)

It is similar to the physical world, but the digital world goes faster and is easy. When information comes, one can press one's response. In the physical world, we have to pass the information through word-of-mouth, telephone, narration or call to someone. However, if any damage occurs, it is not recorded, stored, or shared. It is like we make a gossip, but it does not cause extensive damage; however, digital media can. Once we share any information, it is diffused to hundreds or thousands of people rapidly. What we think can be finished or ended cannot be as we wish. It often comes back to us. It is a kind of risk that reminds us of not using the habits, i.e., gossips, etc. in the real world to use in digital because it is risky. (Thitipong Nandhabiwat, personal communication, February 27, 2018)

Moreover, digital citizens should concern about their social expression Under the accepted values and social practices since in the digital world, users can conceal their real selves, and due to different laws of each country, sometimes, we cannot charge those with misconducts. Accordingly, it facilitates the freedom to

express improperly and to violate others' rights. Thus, digital citizens have to keep these proper rights in mind.

In the ground, in the real world, is not the world in which anyone can shout anything to anybody. It's a world of norms, institution, and codes of practice, and conventional structures. And that does not permit the person with the loudest voice to reach the biggest audience. It embeds the principles of fairness, justice, and inclusion. So if we have these thoughts in designing the internet, perhaps the potential towards digital citizenship would have been better. (Tyner, personal communication, November 5, 2016)

As a consequence, the right to express via digital media should be a beneficial communication for the society as a part of the duties of good citizens of the country. Digital citizens have a right for their social movement, especially towards a positive change in society. It is crucial for digital citizen to understand the forms and goals of a social movement that connects with their right of expression.

If a free expression is a part of Citizenship, the concept is yes. But if it's contributing to society and it is just narcissism, then that's a good question. And it partly depends on the intent, and it partly depends on the perception, and it partly depends on whether it's part of the cultural movement or just a single act in public. Or perhaps one problem of Digital Citizenship is the citizenship as an individual and citizenship we need the collective, so we need to understand the action as part of the movement. (Livingstone, personal communication, November 5, 2016)

#### 8) Digital Security

Digital Security means the use of digital technology by knowing self-defense against those with malice, i.e., no reveal of personal data, installation of anti-virus programs, backups of data, and surge control of digital equipment. Digital Security also includes an understanding of the operating system of digital devices that

may lead to some personal risks as a citizen according to the democratic system without affecting national security

If we want to tell others that we are a digital citizen, we must know when our data is uploaded. We have to be able to keep our privacy although sometimes there is a conflict between privacy and national security or what is accepted in the digital world. For instance, we may say now we do something for the national security, so we spy on others to see how each of them is doing. It can do under dictatorship governance. However, in the free world, is this mechanism acknowledged by general people? Will you accept it? Therefore, the violation of individuals' privacy and national security are often controversial issues in democratic governance. The word digital world means the degree of allowance for such things to happen to protect one's privacy. (Athapol Anunthavorasakul, personal communication, January 17, 2018)

Furthermore, the understanding of digital device operation can lead to personal risks of a consumer. It is another issue to which digital citizens must pay high attention for their safety, i.e., to provide personal data for free downloading or to lend one's digital device to others for connecting or for access to information, etc., that can be used for illegal purposes.

The basic understanding of cyber security is to understand that whenever we use our mobile phone for connecting with any webs, it is risky. To load a new application is risky as well. Therefore, everybody has to be aware of this risk at first. When we will fill up any information or load any application that we do not know where it is, we should not take a risk. At present, there are many fraud applications to draw our data for their purpose. It is a gap, especially if it is for public use, then it will be rather difficult to control. Therefore, it is necessary to illustrate to give some pictures for better understanding. Suppose that there is free WiFi in some areas, and if someone has a malice intention, he can trace it for evil, especially if he is a stranger and we cannot know who he is. The damage can be huge, and we will become the victims. It can be

compared to one of our organs. If we give it to anyone, it is risky. Therefore, this is a gap for anyone who has no digital literacy, and this is what should be taught. Some basic protection in our devices should be equipped, i.e., Antivirus, even though we cannot protect it 100%. At least, we have to understand that we will not load anything if we don't know it. (Thitipong Nandhabiwat, personal communication, February 27, 2018)

The underlying operating system and protection for digital security is vital as the digital security systems often have a gap since new technologies have been developed to serve the convenient use without ceasing, and sometimes users cannot catch up with all these new technologies. Still, the training of necessary skills of digital security and understanding digital operation systems can enhance digital citizens to live in the digital world more safely.

This is a rising interest in securitization. Everyone is learning how to become a security expert. The system is fragile. So you don't teach them digital safety, but you teach them Digital securitization skills, about system and control. Anyway, the argument was that this is going to create the next generation of cyber because the skills of security are also the skills of sabotage. (Tyner, personal communication, November 5, 2016)

Moreover, digital citizens should always be aware that all smart artificial intelligence (AI) can cause a risk towards any crimes or robberies since it can be connected with internet. It then becomes a channel for Cyber Crimes.

Digital citizens have to understand that in the digital world, everything in their houses is all 100% digital. Once we are outside, how can we control it? To turn on an air conditioner, TV, etc. in the house, we will do it through our digital camera. We also have smart refrigerators, smart coffee makers, etc. All of these are good facilities, but they open a gap because all devices or equipment are connected with the computer. If we use the internet at home without any protection devices to prevent illegal hacking, we are risky.

Everything we do at home can be watched without knowing. These smart TV or computers are often equipped with a camera, we can use it to look around or even to play games, but once our computer is hacked, when we watch TV, hackers also watch us too. It is what we call convenience but also risks or dangers. Like the computer at my house, I place tape on every camera, even my computer that is Mac, I also tape every camera to avoid being watched by someone. Nowadays, everything can be done. If we do not know about this, any person can hack our computer or information very easily. Why do they hack? Because they can break into our house to steal something. They can know what we do each day. We may have been watched for weeks or months. Lots of things can be done, even the stealing of information. They can hack everything. Therefore, we will not be happy to have smart devices without increasing our awareness. (Thitipong Nandhabiwat, personal communication, February 27, 2018).

#### 9) Digital Health & Wellness

It means the use of digital technology by concerning its effect on physical and mental health by choosing information, digital devices, or software that are useful for physical and psychological health and by avoiding using digital technology that causes adverse physical and mental health. Digital citizens should prevent access to content that may damage the mental health of themselves. Besides, they should know how to allocate their time and keep the right balance between the degree of using digital devices and timing for accessing digital media in their physical world so that digital world will not bother their real ways of life.

The extreme problem that we often face is an over-addiction to the digital world or people may be so addicted to the digital world that they forget their physical world. It causes people in the digital era to miss their interaction with others in the real world. In the future, when these digital natives are grown up, there will be no digital immigrants. Accordingly, at least we must let these digital natives know that they must use digital media properly for their work

and lifestyle. Thus, a balance between their physical and digital life is needed. They need to have time to communicate with their family and friends. Besides, they must not use digital media excessively until they are addicted to it. For instance, nowadays some children are addicted to playing online games. Not only kids but sometimes adults also are addicted to it as well. Sometimes, I saw some parents allow their children to play while they also play it too. We can call it as new diseases that happen so rapidly. Instead of having a long life with their family, those people will just be occupied with digital games and media and will not do an exercise, especially outdoor exercises. Thus, their outdoor activities will certainly change. Proper allocation of time is thus needed. It should also be reminded that too long use of digital media can cause mental problems too. People use it so much that their concentration for other things is shortened. On the other hand, to watch something that stimulates their feeling too much will also cause their mental problem. (Thitipong Nandhabiwat, personal communication, February 27, 2018).

### **5.3 A Synthesis of Theoretical Concepts and Attributes of Digital Citizenship**

From the study through various kinds of research methods: documentary analysis, the survey on digital natives' media usage behaviors and their digital citizenship, a focus group interview with digital natives, and in-depth interviews with experts, theoretical concepts and attributes of digital citizenship can be synthesized as follow.

For the concepts of digital citizenship, the national governance systems or government management must be taken into account since it reflects the conceptual framework and fundamental practices that are connected to the concept and practice of digital citizenship. Notably, in terms of an individual's rights, duties, and responsibilities as a citizen of the country and as an accepted member of the society. Individuals must connect their identity in the digital to that in the physical world to have a harmonious co-existence.

Furthermore, in democratic governance, Thai people have to live by laws under Thai Constitution because of the underlying assumption of being a national citizen that Thai people must know and understand the rights and duties in their participation or social practices genuinely. Correctly, Thai citizens can use their potential in the right ways according to Thai Constitution, and this kind of citizenship is a desirable attribute of digital citizens as well. Accordingly, the concept of digital citizenship requires concern of the rights in information accessibility but with the responsibility in accessing the information and in using and producing data for social participation with a sense of being a part of the society or community, either of the physical or digital world. Additionally, it includes the respect of others' rights by being aware of their roles in the digital world with responsibility in accessing, searching, and applying information in the real world.

However, most digital natives in Thailand lack an understanding of their rights and duties according to Thai Constitution. In short, digital citizenship of Thailand should possess these three types of citizenship: Responsible Citizen, Participatory Citizen, and Justice-oriented Citizen, in balance and appropriate for their ages and social context.

### **5.3.1 The Definition of Digital Citizenship**

In creating the goal of digital citizenship, it should consider about government system, state supports, the context of using digital media, especially of digital natives, and citizenship via digital media. Nevertheless, the goal of creating digital citizenship must be tangible and practical, and should not be only at the awareness level. Importantly, the goal should also emphasize the creation of citizenship in the role of change agents, who are expected digital citizens of Thailand.

Besides the creation of digital citizenship with a consideration on the government management of the country as its foundation, it should also be aware that the strength of digital citizenship promotion in Thailand comes from its focus on the democratic governance to be comparable to the digital world. In the digital world, everyone is equal in accessing information via various platforms. It is apparent that the government has tried to provide such service to support digital citizenship democratically. In other words, the government needs to decrease the digital divided



and enables all citizens to access and use the information with responsibilities while respecting others' rights. As a consequence, other types of governance cannot facilitate the creation of digital citizens like democracy governance.

In short, the concept of digital citizenship appropriate for digital natives in Thailand means the idea that enables the social practices in the digital world to connect with those in the physical world. Its purpose is to create an immunity to protect oneself and to orient oneself to co-exist with others happily under the digital context with leaping and continuous development and changes. In living via all digital possibilities, digital citizens should have a sense of humanity or manhood, i.e., an awareness of one's rights and responsibilities, being ethical, catching up with social changes, and consideration on the scope of one's and others' rights and freedom. Digital citizens should understand their own identity and be able to use digital media to communicate their status correctly concerning diversity among people. They also can use digital media for lifelong learning to be equipped with various entrepreneurial skills. Besides, they can make use of digital technology towards social participation for public benefits. Digital citizens must be assertive to express their opinions to call for social justice to bring about positive changes in their society.

Furthermore, digital citizens should have an inspiration, be enthusiastic and creative, and know how to use available digital devices and systems towards maximal benefits with public concern. Notably, digital citizens should sacrifice and devote themselves to society as national citizens, world citizens, and digital citizens. Thai core values, i.e., the respect for the elder, the focus on the family institution, etc. should be maintained as they are graceful Thai values and are the foundation that makes people respect others, be kind and helpful. All of these can be applied in the digital world.

The central concept of digital citizenship is the concept for connecting people's physical world with their practices in the digital world properly and vice versa as national and world citizens while maintaining their identity in an appropriate and versatile way. Therefore, the concept of digital citizenship should emphasize cultivating people mainly. This concept will be used as a framework in creating desirable characteristics of digital citizens required for living in the digital world

properly in parallel to the development of human capital as a preparation towards the age of digital economics and society of Thailand.

### **5.3.2 Attributes of Digital Citizenship Suitable for Thai Society Context**

In creating digital citizens, appropriate attributes for social context, both in the physical and digital world, should be concerned. These attributes will facilitate their living in the digital world. The ultimate goal of this concept is to create the expected digital citizens who can make use of all digital possibilities for their survival in the society. Thus, they will be ready towards lifetime learning, be responsible, aware, and cautious, while being able to maintain their identity and Thai core values. Social participation for public benefits and the expression of ideas for social justice are also essential attributes of digital citizens. In short, digital citizens should possess the following features:

#### 1) Digital Literacy

Digital literacy means the analytical use of digital technology for receiving and transmitting information by always concerning about its effect on oneself, others, and society with discretion, which leads to social expression and participation in digital society towards the beneficial changes for the nation. Thus, digital citizens should possess all necessary skills to use digital technology with digital literacy (Hobbs, 2010) as follow:

- 1) Knowledge of how to acquire the correct information, i.e., the use of devices or software for proper access.
- 2) Analysis and interpretation of digital data to respond to the desired utility.
- 3) Evaluation and classification of information for the appropriate application.
- 4) The adoption of useful details through proper digital devices to contribute to active participation for oneself and society.
- 5) The induction of creative changes that are useful for the nation through digital media.

## 2) Digital Communication

For digital citizenship, communication through digital media needs to be transmitted accurately and effectively to achieve the intended goals. The content in connection through digital media should be creative while the proper and suitable channel and the digital device should be selected, based on the public concern mainly. Self-restraint and care of possible adverse effect of communication caused by digital media are crucial. In the digital world, including a participative communication or the creation of content for changing society in Thai context, it is essential always to realize that such disclosure is beneficial for the public as a whole, not for the benefits of only some groups in the society as it may cause a long-term effect.

## 3) Digital Commerce

Digital commerce means the use of digital technology for doing business transactions and online purchase of products, including the use of entrepreneurs to make use of the digital channel for their business. Digital citizens who are service-users need to know how to use it and how to verify all received information from both service-givers and entrepreneurs. Enthusiasm should be enhanced to call for and verify information under the strict surveillance of the government to avoid being deceived or cheated.

Nevertheless, digital citizens, either as service providers or as entrepreneurs, should respect the rules and conduct business with honesty and responsibility, including complying with ethical codes and laws related to E-transactions and E-commerce. On the other hand, the government should clarify how to make use of the database for entrepreneurship so that entrepreneurs can comply with the requirement of E-transactions and commerce, which can stimulate national economic in another way.

## 4) Digital Etiquette

Digital etiquette means the use of digital technology with proper manner, politeness, and creativity without leaving any inappropriateness in the digital world, i.e., not hurting others' feeling, not damaging others' identity, including having the suitable manner in using any device that may affect social expression in the physical world.

Besides, one should realize that to share information on the internet cannot always control other people's privacy in spite of some protection mechanism. Therefore, one should not share any incorrect information that might damage other people's reputation or welfare, both physically or mentally. It should also be aware of sharing information with some creative digital footprint that might be useful for others and society.

#### 5) Digital Access

Digital access means the ability to access digital technology (technological infrastructure) sufficiently and adequately in terms of digital devices and all facilities. Part of digital access can be adequately provided and widely by the government for equality in society. However, at the same time the government needs to provide clear necessary information to assure people that they can access digital technology widely in both urban and rural area for their uses as national citizens, which has to start with the readiness of technological infrastructure, i.e., connecting networks, stable network integration for public service, etc. To build an understanding on the usage of information through digital system operation and the infrastructure of digital technology prepared by the government, i.e., the use of database from ID number to obtain all governmental welfare and services, is access connected from physical to digital world. It can decrease the technological inequality in some ways. Hence, the government should promote the understanding of these benefits to create people's right attitude towards accessing the state service through digital system operation. It is a part of developing the digital society of Thailand.

Besides the state's support of accessibility to digital technology, people themselves should know the objectives for accessing such technology clearly and thoughtfully for full use that will be beneficial for themselves and their society.

#### 6) Digital Laws & Ethics

Digital laws and ethics mean the use of digital technology ethically and legally that is beneficial for the users themselves, for others, and their society. The relevant basic laws and ethics digital citizens should know are copyright law, consumer protection, computer act, human rights, and media ethics. At the same time, the state should manage the issuance of regulations and requirements and enforce them seriously to support the creation of complete digital citizenship. Furthermore,

the laws and ethics relating to co-existence in the digital world be contained in the textbooks or educational curriculum to increase people's awareness of these laws. Moreover, methods, procedures, or steps of legal actions, including contact channels should be suggested so that people can apply in their daily life when facing such problems.

#### 7) Digital Rights & Responsibilities

Digital rights and responsibilities mean the use of digital technology by knowing the limit of their rights in social media and by being responsible for not expressing anything that violates others' rights and privacy. Concerning their right of free expression, it is also the most important thing of digital citizenship, which accords with the fundamental principle of citizenship in general. The awareness of one's expression with a concern of human rights, privacy, and the respect of people's diversity is essential but difficult to do, especially the protection of one's privacy to avoid personal risks in parallel to the respect for others' privacy. Personal data should not be posted or disseminated without permission, and it should be aware that any digital expression always requires a digital footprint. Accordingly, digital citizens should be ready to be responsible for their mediated expression whenever it affects others' rights and privacy or when it yields any negative consequence, either intentionally or unintentionally, to society. Consequently, it should always be aware that situations in the digital world cannot still be controlled.

Moreover, digital citizens should concern about their social expression by the accepted values and social practices. In the digital world, users can conceal their real selves, and due to different laws of each country, sometimes, we cannot charge those with misconducts. Accordingly, it facilitates their freedom to express improperly and to violate others' rights. Thus, digital citizens have to keep these proper rights in mind.

As a consequence, the right for free expression via digital media should be a beneficial communication for the society as a part of the duties of good citizens of the country. Digital citizens have a right for their social movement, especially towards a positive change in society. It is vital for digital citizen to understand the forms and goals of a social movement that connects with their right of expression.

### 8) Digital Security

Digital Security means the use of digital technology by knowing self-defense against those with malice, i.e., no reveal of personal data, installation of anti-virus programs, backups of data, and surge control of digital equipment. It includes an understanding of the operating system of digital devices that may lead to some personal risks as a citizen according to the democratic system without affecting national security.

Furthermore, the understanding of digital device operation can lead to personal risks as a consumer is another issue to which digital citizens must pay high attention to their safety. Examples are to provide personal data for free downloading, to borrow others one's the digital device for connecting or access to information, etc., that can be used for illegal purposes.

Moreover, digital citizens should be always aware that all smart artificial intelligence (AI) can cause a risk towards any crimes or robberies since it can be connected with internet. It becomes a channel for Cyber Crimes.

### 9) Digital Health & Wellness

It means the use of digital technology with concern on its effect on physical and mental health by choosing information, digital devices, or software that are useful for physical and psychological health and by avoiding using digital technology that causes adverse physical and mental health. Digital citizens should prevent access to content that may damage the mental health of themselves. Besides, they should know how to allocate their time and keep the right balance between the degree of using digital devices and timing for accessing digital media in their physical world so that digital world will not bother their real ways of life.

## **5.4 A Summary of the Research Findings on the Concepts of Digital Citizenship Suitable for Digital Natives in Thailand**

From the study of the concepts of digital citizenship suitable for digital natives in Thailand, the findings can be summarized into two main topics.

- 1) A summary of the results on the relevant contexts relating to digital citizenship in Thailand
- 2) A summary of the findings on the attributes of digital citizenship suitable for digital natives in Thailand

### **5.4.1 A Summary of the Findings on the Relevant Contexts Relating to Digital Citizenship in Thailand**

From the backgrounds relating to digital citizenship in Thailand, i.e., state policies related with digital citizenship, situations of digital citizenship in Thai society, and the obstacles against digital citizen development in Thailand, an eco-system of creating digital citizenship in Thailand comprising the following:

- 1) digital natives as human capital for national development.
- 2) the promotion of democratic citizenship in Thailand
- 3) digital economy and society policies of Thailand
- 4) technological growth or advancement
- 5) the education on digital literacy (from both formal and non-formal education system)
- 6) the pattern of digital media usage behaviors of digital natives, which is an eco-element of creating digital citizenship suitable for digital natives in Thailand and is the factor affecting the development of digital citizenship. The eco-system for creating digital citizens in Thailand is summarized in the following figure.



**Figure 5.1** Eco-System for Creating Digital Citizenship Suitable for Digital Natives in Thailand

From the above figure, the factors of the eco-system affecting the development of digital citizens in Thailand that are suitable for digital natives are as follow:

1) Digital Natives as Human Capital for National Development

To increase the technology-competitiveness potential at a global level, Human development plays a great role. Especially the number of young laborers into the field of technology is increasing, in combination with the progress towards digital literacy. Among human capital development, Thai digital natives aged 15-24 years old are one of the significant human capital needed to be developed. This group of digital natives is born in the technology era and use technology the most, (ITU, 2013). This group can be considered as a significant force in driving information technology in Thailand.



## 2) The Promotion of Democratic Citizenship in Thailand

Different ruling systems give importance to the concept of digital citizenship differently. In Thailand, the promotion of equality of people in accessing and making use of digital technology is based on the democratic ideology. Nevertheless, digital natives have not used digital media as digital citizens and do not understand the meaning of their rights as they should. The digital world provides an opportunity for people to perform their social expression as national citizens in various ways and these digital natives have power and creative ideas in mobilizing society. Still, they have not been cultivated or absorbed a sense of membership as they should. Consequently, to give authority for them to participate in social actions by listening to them and by adopting their ideas as citizens to be considered and applied with all mechanisms for social mobility. It thus will be a significant force in supporting the creation of digital citizens in Thailand.

## 3) Digital Economy and Society Policies of Thailand

From the overall objectives of the policies in mobilizing economic and social development of the country towards stability, security, and sustainability, digital technology has been applied as the primary tool in the innovation of products and services. Hence, several supporting policies are needed. As an example, an equal opportunity to access to and use of information and services through digital media can raise the standard of people's living. All groups of people should be prepared to have proper knowledge and skills needed for their life and their professions in the digital era, a reform of working and service provided by the state through digital technology, etc. All of these policies are parts of the required operation of the country in creating digital citizens and, likewise, the state must rely on the power of these digital citizens to help them to accomplish their determined policies.

## 4) Technological Growth and Advancement

Leaping technological growth leads to the development of all digital tools and devices. Thailand has developed many innovations and technical infrastructure to support the digital economy development, up to the development of the international gateway and national broadband to transmit and receive digital information across ASEAN countries and around the world. The primary purposes are to promote the usage of technology for people's profession, commerce, education, and

living facility. Since the technological development is a leap and is a significant force on people's ways of life in the society, to prepare people to be ready and to keep up with all these technological situations towards their maximal benefits as digital citizens is thus very essential.

#### 5) Education on Digital Literacy (both formal and non-formal)

From the empirical evidence, digital natives still are different in their selection of proper digital devices suitable for their use and needs, in their interpretation and connection of information from the digital world, and their information management for daily use. These are some gaps that can be cultivated in the digital natives towards digital citizenship. The enrichment of people's technical skills may not be sufficient for digital natives. People still have to learn more about changes in the global society and also in their society where they have to comply with its social, political, economic, and social paradigms as the national citizens and as the part of membership of the community, society, country, and the world, which includes the digital world. Both formal and non-formal education is essential for promoting digital citizenship accordingly. The situation, patterns, goals, and tools in implanting digital literacy should be educated, especially since the media literacy and digital citizenship should be promoted in parallel.

#### 6) Patterns of Digital Media Usage of Digital Natives

Models of digital media used by digital natives are both unstructured and highly structured. Besides, digital natives have different media exposure and access behaviors at different levels. Still, online media or social media is mostly used by digital natives for receiving information that responds to their interest. Due to the rapid diffusion via various kinds of channels, digital natives thus emerge in Thai society very rapidly. These digital natives play a part in supporting the economic mobilization of Thailand. Mainly, they cannot conduct their activities by separating their use of digital technology from their daily life. Consequently, digital technology plays a significant role for people of this group and thus the implantation of digital citizenship is vital so that these digital natives can live with digital technology effectively and beneficially for public benefits.

From the abovementioned factors that affect the components of the eco-system of digital citizenship creation, such factors should be used as a foundation for

developing the concept and attributes of digital citizens suitable for digital natives by inventing some indicators for them to check and evaluate themselves. Then, they can know of which attributes or factors they are short and can be stimulated to develop themselves in those certain factors or attributes. At the same time, this concept can be communicated more effectively if the state or government supports it or let other organizations, accepted by digital natives, to be a direct communicator to ensure the accessibility to the target group.

#### **5.4.2 A Summary of the Findings on the Concept and Attributes of Digital Citizenship Suitable for Digital Natives in Thailand**

It can be summarized from this study that the concept of digital citizenship appropriate for digital natives in Thailand means the idea that enables the social practices in the digital world to connect with those in the physical world. Its purpose is to create an immunity to protect oneself and to orient oneself to co-exist with others in harmony under the digital context with leaping and continuous development and changes.

In living via all digital possibilities, digital citizens should have a sense of humanity or manhood, i.e., an awareness of one's rights and responsibilities, of being ethical, catching up with societal changes, and consideration on the scope of one's and others' rights and freedom. Digital citizens should understand their own identity and be able to use digital media to communicate their status properly with respect to diversity among people. They also can use digital media for lifelong learning to be equipped with various entrepreneurial skills. Besides, they can make use of digital technology towards social participation for public benefits. Digital citizens must be assertive to express their opinions to call for social justice to bring about positive changes in their society.

Furthermore, digital citizens should have an inspiration, be enthusiastic and creative, and know how to use available digital devices and systems towards maximal benefits with public concern. Notably, digital citizens should sacrifice and devote themselves to society as national citizens, world citizens, and digital citizens. Thai core values, i.e., the respect for the elder, the focus on the family institution, etc. should be maintained as they are graceful Thai values and are the foundation that

makes people respect others, be kind and helpful. All of these can be applied in the digital world.

Accordingly, from the study, the indicators of digital citizenship attributes are proposed as guidelines in promoting digital citizenship for digital natives in Thailand. Guidelines are proposed through several approaches. The first approach is through the ways of bringing up and cultivating digital citizenship or what should be considered to enable Thai people to be digital citizens to live in society as expected. The other approach is the installation of some self-protection mechanisms for digital citizens or what kind of arrangements or rules enable people to have a harmonious co-existence in both the physical and digital world. These two approaches can be divided into three sub-guidelines as follow:

- 1) The promotion through education on digital literacy, digital communication, and digital commerce.
- 2) The enhancement of the respects in relations to digital etiquette, digital access, and digital laws and ethics.
- 3) The promotion of self-protection and responsibility or digital rights and responsibilities, digital security, and digital health & wellness.

The guidelines for promoting digital natives in Thailand towards digital citizenship according to expected attributes and indicators are summarized in Table 5.1

**Table 5.1** Guidelines for Promoting Digital Natives in Thailand towards Digital Citizenship According to Expected Attributes and Indicators

<b>Guidelines</b>	<b>Digital Citizenship Attributes</b>	<b>Digital Citizenship Indicators</b>
<b>Educate</b>	<b>1. Digital Literacy</b>	<ul style="list-style-type: none"> <li>- Knowledge of how to access correct information</li> <li>- Ability to analyze and interpret information in the digital world to serve the benefits needed.</li> <li>- Ability to evaluate, classify, and apply types of information properly</li> <li>- Knowledge and ability to participate in the society in a beneficial way for themselves and for the society through digital media or devices.</li> <li>- knowledge and ability in creating changes or acts that are beneficial for the society through digital media or devices.</li> </ul>
	<b>2. Digital Communication</b>	<ul style="list-style-type: none"> <li>- Knowledge and ability in using digital devices and platforms appropriate for communication objectives.</li> <li>- Knowledge and expertise in participatory communication for public benefits.</li> <li>- Knowledge and understanding of types of communication that are creative in changing the society towards a positive way (Communication for Change).</li> <li>- ability in evaluating the consequences of communication in the digital world. (Communication evaluation)</li> </ul>

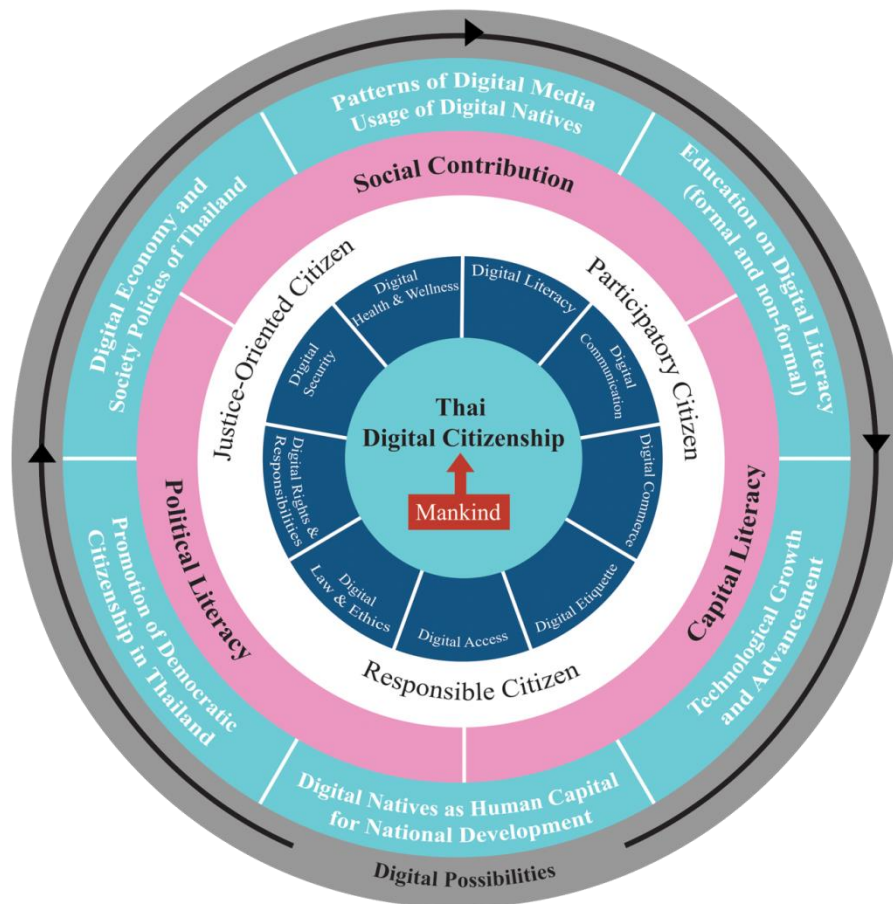
**Table 5.1** (Continued)

Guidelines	Digital Citizenship Attributes	Digital Citizenship Indicators
<b>Respect</b>	<b>3. Digital Commerce</b>	<ul style="list-style-type: none"> <li>- Basic knowledge on how to use and verify the information for e-commerce and e-banking (Digital Commerce Process)</li> <li>- Knowledge of rules and regulations of honest and responsible commerce in the digital world. (Digital Commerce Honesty)</li> <li>- Skills of entrepreneurship towards maximal digital possibilities. (Digital Entrepreneurial Generation)</li> </ul>
	<b>4. Digital Etiquette</b>	<ul style="list-style-type: none"> <li>- Knowledge of timing for communication and restraint in using digital media.</li> <li>- The use of formal language. (Politeness)</li> <li>- The creation of content that causes no emotional disturbance. (Positive Content)</li> </ul>
	<b>5. Digital Access</b>	<ul style="list-style-type: none"> <li>- Being equipped with devices and systems that can access to the digital world by their rights and duties as citizens.</li> <li>- Being supported by digital technology accessibility by the state.</li> <li>- Knowing their needs for accessing the digital world by their rights and responsibilities as citizens.</li> </ul>
	<b>6. Digital Law &amp; Ethics</b>	<ul style="list-style-type: none"> <li>- Understanding of basic ethics of media producers in selecting proper information.</li> <li>- Compliance with basic laws related to living in the digital world that is beneficial for themselves, others, and society.</li> <li>- Accordance with ethics-related with human rights.</li> </ul>

**Table 5.1** (Continued)

<b>Guidelines</b>	<b>Digital Citizenship Attributes</b>	<b>Digital Citizenship Indicators</b>
<b>Protect</b>	<b>7. Digital Rights &amp; Responsibilities</b>	<ul style="list-style-type: none"> <li>- Knowledge of the scope of rights for free expression in the digital world.</li> <li>- Being responsible for their expression in the digital world.</li> <li>- The protection and respect of other's rights and privacy.</li> <li>- Leaving no improper digital footprint that is risky for themselves and others.</li> </ul>
	<b>8. Digital Security</b>	<ul style="list-style-type: none"> <li>- Protection of personal information. (Self-Protection)</li> <li>- Protection against any risks caused by digital operating systems and devices. (Digital Risks)</li> <li>- Installation of an anti-virus program (Virus Protection)</li> <li>- Backups of Data (data protection)</li> <li>- Installation of a security system for digital devices (surge control of digital device)</li> </ul>
	<b>9. Digital Health &amp; Wellness</b>	<ul style="list-style-type: none"> <li>- Selection of digital devices, programs, and data that are useful for physical and mental wellness.</li> <li>- Avoidance of using digital media and of accessing content that affects physical and psychological health.</li> <li>- Allocation of time and maintenance of life-balance in the physical world that is substantially driven by digital systems.</li> </ul>

From synthesizing the eco-system of creating digital citizens suitable for digital natives in Thailand with the concepts and attributes of digital citizenship, the results are presented in the following model.



**Figure 5.2** Model of Digital Citizenship Suitable for Digital Natives in Thailand

From figure 5.2, from synthesizing the findings or connecting the eco-system of creating digital citizenship suitable for digital natives in Thailand in combination with concepts of digital citizenship, three kinds of citizens are found: Responsible Citizens, Participatory Citizens, and Justice-Oriented Citizens. In other words, digital natives in Thailand who are digital citizens should express their social practices in the digital world in connection with their physical world. The main purpose is to create an immunity for themselves and for co-existing with others in the society in harmony under all digital possibilities. The digital citizens expected in Thai society context



should focus on their social contribution. On the other hand, they should keep up with capitalism (capital literacy) to protect themselves from being victims of all possible risks in digital world driven by capitalism, including keeping up with the democratic governance situation in Thai society (political literacy) in order to participate in social changes properly as citizens.

Besides, digital citizenship should base on humanity or manhood while making use of digital technology in social participation for public benefits as the national, global, and digital citizens under the nine attributes of digital citizenship: Digital Literacy, Digital Communication, Digital Commerce, Digital Etiquette, Digital Access, Digital Law & Ethics, Digital Rights & Responsibilities, Digital Security, and Digital Health & Wellness.

Furthermore, the model of digital citizenship suitable for digital natives in Thailand should add some indicators to measure the proximity or interactions among network users because the youth who have close proximity with the network members who have strong digital citizenship tend to have a high possibility in absorbing digital citizenship as well.

## **CHAPTER 6**

### **SUMMARY, DISCUSSION, AND RECOMMENDATION**

The research, “Conceptualizing Digital Citizenship for Digital Natives in Thailand” was aimed to 1) explore the digital media usage behaviors of digital natives in Thailand, 2) measure the level of digital citizenship of digital natives in Thailand, 3) examine the relationship between digital media usage behaviors and digital citizenship of digital natives in Thailand, 4) study the contexts related with digital citizenship in Thailand, and 5) conceptualize characteristics of digital citizenship suitable in Thai society. The findings of the study were summarized and concluded.

#### **6.1 Summary of Research Findings**

The findings of this study were divided into four main topics:

- 1) Digital media usage behaviors and the level of digital citizenship of digital natives in Thailand
- 2) The relationship between digital media usage behaviors and digital citizenship of digital natives in Thailand
- 3) The contexts related to digital citizenship in Thailand
- 4) The conceptualization of characteristics of digital citizenship suitable in Thai society.
- 5) A synthesis of concepts and attributes of digital citizenship suitable for digital natives in Thailand.

##### **6.1.1 Digital Media Usage Behaviors and Digital Citizenship of Digital Natives in Thailand**

The study on digital media usage behaviors and digital citizenship of digital natives in Thailand was conducted from 400 digital natives in Thailand with online questionnaires. The findings were then synthesized with the conclusions of the focus

group interview with digital natives to evaluate the characteristics of digital citizenship for digital natives in Thailand to conceptualize the digital citizenship and its attributes in combination with documentary research of both local and foreign document and in-depth interviews with experts regarding digital citizenship in Thailand.

For general information of the respondents, it was found that 144 respondents were male (36.00%), 241 were female (60.25%), and 15 were alternative sex (3.75%). 210 respondents were 15-18 years old (52.50%), 98 respondents 19-22 (24.50%), and 92 respondents 23-24 (23.00%). Most respondents (211 samples) were students at lower than undergraduate level (52.75%), and the next was 145 students at an undergraduate or higher level (36.25%). Most respondents (165) were studying at the undergraduate level (41.25%), 147 at upper secondary education or senior high-school level (36.75%), and 73 at lower secondary education or junior-high-school level (18.25%) respectively. 335 respondents were studying in the formal educational system (83.75%) and 65 in the non-formal educational system (16.25%). Most respondents (154 respondents) earned between 5,000-10,000 baht monthly (38.50%) and 151 earned lower than 5,000 baht monthly (37.75%) respectively.

#### 1) Digital Media Usage Behaviors of Digital Natives in Thailand

From data collection on digital media usage behaviors of digital natives in Thailand, it was found that most of the respondents (158) spent 5-6 hours on using digital media (39.50%), and 91 respondents more than 8 hours (22.75%). Regarding the connection to the internet, most respondents (267) used 4G to connect to the internet (66.75%), and 114 respondents used Wi-Fi (28.50%). 370 respondents used digital media at their residence (32.43%), followed by at school/university/ working office (265 respondents or 23.23%). Besides, it was found that 328 respondents used SmartPhone the most at the first rank (82.00%), notebook at the second rank (192 respondents or 48.00%), and tablet at the third rank (113 respondents or 28.25%)

Concerning digital media usage behaviors in relations to the level of expertise in the digital world and level of digital citizenship, it was found that the mean of digital media usage behaviors was between 2.97-4.13. When interpreting each dimension, it was found that the level of expertise in using digital media was at a “high” level ( $\bar{x}=3.91$ ). The statement evaluated with the highest mean was “you can

search for information from digital media well” ( $\bar{x}$ = 4.13). The level of digital citizenship was at “high” level ( $\bar{x}$ =3.57). The statement evaluated with the highest mean was “in sharing information, images or in posting statements, you will think about ethics and social responsibility without damaging the reputation or ways of living.” ( $\bar{x}$  = 3.93).

Nevertheless, to obtain more various and complete information useful for the building of a conceptual framework for appropriate digital citizenship in Thai society, three groups of focus group interview were conducted. From the focus group interviews with digital native representatives of all three ranges of age, it was found that the respondents preferred using digital media on multiplatform and used Twitter, Facebook, and YouTube regularly. The factors affected their use of platforms were a) update, rapidity, and multi-content, b) credibility, c) attention and interest, and d) interactivity and participation. Besides, the respondents used digital media for searching information, following up the news, and presented their stories, which were congruent with the functions on the platforms of Website, Twitter, Facebook, and YouTube that they used regularly.

For the expertise in the online world, it could be concluded that the samples had fundamental knowledge in digital devices and application and could choose them to use it properly for each purpose of use, which accorded with their lifestyle. Moreover, digital tools and forms were used to facilitate all activities for following specific interest skillfully. The respondents were also aware of using digital media that suited themselves. Besides, most of the users of the same age could understand how to use digital media, select proper device, and understand the objective of their use at the moderate level

Furthermore, it was found that the samples had analytical thinking and could use the information thoughtfully in terms of techniques of creating accessible information, of screening information, and of interpreting the hidden meanings in the message or data. It was found that the samples of every range of age stated that at their ages improper content creation was still widely witnessed, which might be harmful to the creators themselves and for others. Mostly, the shares and comments expressed careless thought or lacked thorough searches of facts, such as rude or

inappropriate words in social media, improper behaviors and stories of themselves and others.

## 2) Digital Citizenship of Digital Natives in Thailand

From the survey of the opinion of digital natives in Thailand towards the level of digital citizenship, it was found that the overall digital citizenship of the respondents was at “strongly agree” or “high” level ( $\bar{x} = 3.71$ ). When analyzing each issue, it was found that digital access was at “strongly agree” or “high” level ( $\bar{x} = 3.99$ ).

The issues with the highest mean were “you think that at present online purchase is common for technology users” ( $\bar{x} = 4.07$ ), and “you have username and password to enter the computerized or communication devices” ( $\bar{x} = 4.06$ ), which was under digital securitization.

From the focus group interviews, it was further found that digital natives of different ages understood digital citizenship differently. The higher secondary students were found to have basic theoretical knowledge on digital citizenship, but they did not realize that something they were doing was a part of performing as a digital citizen. Mostly, they just understood that it was a good thing to do. For undergraduate students and first-jobbers, they knew their rights and could criticize as a citizen, i.e., governmental welfares and services, etc.

Furthermore, in the context of digital citizenship, the higher secondary students had a fundamental responsibility in using digital media, or they complied with rules and regulations in using the media, both established by their family and by the Information Service Provider (ISP).

Undergraduate students and first-jobbers knew their fundamental rights and also could criticize the government's work, which was also a part of fundamental digital citizenship. In other words, they were responsible for themselves or complied with the rules of digital media use stipulated by both their own family and by the information service provider (ISP). Furthermore, undergraduate students and first-jobbers were responsible for their social expression via digital media and concerned about the consequences caused by improper use of digital media. On the other hand, they perceived that users of their age mostly ignored those things. In addition, the samples used digital media for the studying engagement and for supporting their

families and society. Still, for the digital media use to preserve social justice, most of them focused only on the issues in which they were interested and which were the social currents.

### **6.1.2 The Relationship between Digital Media Usage Behaviors and Digital Citizenship of Digital Natives in Thailand**

From analyzing the relationship between digital media usage behaviors and digital citizenship, it was found that digital access, digital commerce, digital communication, digital literacy, and digital etiquette had a moderate correlation with digital media usage behaviors ( $r = 0.67$ ) at the significance level of 0.01, which confirmed the hypothesis. Besides, digital laws and ethics, digital rights and responsibilities, digital health and wellness, and digital security had a weak or low correlation with digital media usage behaviors at the significance level of 0.01.

Digital media usage behaviors in the dimension of online expertise were found to have a moderate correlation with digital citizenship at the moderate level ( $r = 0.66$ ) at the significance level of 0.01, which confirmed the hypothesis

From the analysis, it was found that the digital media usage behaviors in the dimension of online participation as a citizen had a moderate correlation with digital citizenship ( $r = 0.61$ ) with the significance level of 0.01, which confirmed the hypothesis.

From analyzing each aspect of digital citizenship, it was found that digital commerce, digital communication, and digital literacy had a moderate correlation with digital media usage behaviors at the significance level of 0.01, which confirmed the hypothesis. Besides, digital access, digital etiquette, digital laws and ethics, digital rights and responsibilities, digital health and wellness, and digital security had a weak or low correlation with digital media usage behaviors at the significance level of 0.01.

From the study, it can explain that the reason why the relationship between digital media usage behaviors and digital citizenship in the dimension of digital laws and ethics, digital rights and responsibility, digital security, and digital health and wellness is low is that Thai digital natives do not have advanced skills and competencies, which requires knowledge, understanding, and awareness of the laws

and sensitivity of some issues on rights, wellness, and security in digital world. This illustrates that the present digital media usage behaviors of Thai digital natives may not facilitate an acceleration of their qualification to reach a complete digital citizenship in all dimensions. Mainly, the measurement of digital citizenship level is based on theoretical concepts and research from abroad. Therefore, Thai society may need to adjust the idea to be more suitable for Thai context. From the study, it was found that their characteristics of digital citizenship in the dimension of digital laws and ethics, digital rights and responsibilities, and digital health and wellness, which were found to have a low relationship with the digital media usage behaviors, are all based on the western concepts. Consequently, it is necessary to design the concepts and attributes of digital citizenship that are more suitable for the Thai context.

### **6.1.3 The Contexts Related with Digital Citizenship in Thailand**

In studying the contexts related with digital citizenship in Thailand, the findings on the issues supporting the creation of digital citizenship were presented as follow:

#### 1) The State Policies Related with Digital Citizenship in Thailand

The state policies related with digital citizenship in Thailand and the structure of government policies in Thailand were found to support the digital technology, i.e. the policies of E-government or Digital Economy, etc. Hence, this leads the infrastructure of information-processing technology to grow much faster than the cultivation and development of people in the nation. However, according to the National Economic and Social Development Plan, Issue 11 (B.E. 2555-2559), which emphasizes the human development and the national development through an immunization at all levels: individual, family, and community, towards a quality society to be able to manage the risks and to adjust itself to the changes. Besides, a part of the National Economic and Social Development Plan, Issue 12, adheres to the principle of national development towards stability, sustainability, and peaceful co-existence in the society. All of these are based on human development that accord with the policy of Thailand 4.0.

Digital Thailand means Thailand can create and make use of digital technology fully in developing infrastructure, innovation, information, human capital,

and other resources to mobilize the national economic and social growth towards national stability and sustainable development. According to the Digital Development Plans for economics and society, the Thai government puts high importance to building digital community and economics and to transforming Thailand to be the leading digital country in the ASEAN. Digital economics is vital for mobilizing innovation, competition, and the growth at the international level.

In developing human resources according to Thailand 4.0 strategy, one of the main goals is to develop human capital, who are digital natives of Thailand, aged 15-24 years old, who were born together with technology and who use technology the most (ITU, 2013). This group of people is the dominant force in driving information technology of the country. Besides, these people are confident of their expertise in using digital devices to access or in creating media in the online world more than their parents, teachers, or who have duties on teaching. However, from empirical data on various media, it was found that Thai digital natives lack digital literacy for analyzing and distinguishing media content and require the rational use of multiple media. It can be seen from some examples, such as the addiction to the games, the access to filthy or obscene media, the comments, shares, and posts without concerning the consequences that might happen to themselves and others. All of these indicate a lack of responsibility and understanding of the proper rights of a digital citizen or physical citizen.

Furthermore, Thailand is a democratic country, so Thai people have to comply with the Thai constitutional laws and have to understand the basic principles of their citizenship. Beyond the duty to vote in an election, Thai citizens have to know and understand their rights and responsibilities in social participation and practices. In other words, they should use their potentials righteously according to the constitution. The said citizenship is also required and desired in the digital world. Accordingly, the concept of digital citizenship involves the rights to access the information-driven in the digital world with responsibility in their access, use, and production of information, as a part of social involvement through a sense of belonging to both digital and real worlds. The respect for others' rights as a part of their roles in the digital community with responsibility while accessing and searching information for he use in the real world is also included.



## 2) The Situation Related to Digital Citizenship in Thai Society Context

In synthesizing the concept of digital citizenship, social condition and the national ruling system should be concerned because both can reflect fundamental concepts and practices of citizenship and also can connect to the concept of digital citizenship. The different social condition gives importance to the idea of digital citizenship differently. From the findings, three main concepts of digital citizenship are 1) digital citizenship that devotes themselves for social contribution 2) digital citizenship that can keep up with politics (political literacy), and 3) digital citizenship that can keep up with capitalism (Capital literacy). The development of people towards digital citizenship who devote themselves for social contribution should emphasize those who can make use of digital technology with their full potential to create immunity. The development can start from the individual, family, community, up to societal level, to enable them to adapt to changes, and to motivate them towards social participation including positively changing society. For most European countries, they focus on the use of all digital possibilities, i.e., the use of digital technology towards more productivity and well-being or political participation, etc. In other words, in Europe, especially in the United Kingdom, the digital citizens with civic literacy are highlighted by providing an opportunity for people to express their ideas as citizens in various ways. While in the context of American society, which is capitalism-oriented and driven by digital technology, digital possibilities towards capital literacy is promoted.

Therefore, to develop citizenship under the rapid changes of the world by only teaching them to be literate and to know technological science may not be sufficient. People must learn about the changes of the world and social order in economics, politics, and society, especially in the governance or ruling system in which they belong to, including participation because of their membership in the community, the organization, the nation, and the world, including the digital world.

From analyzing the support of the government for digital citizenship, it was found that the Thai government has adopted the country towards digitalness for a service through complete digitalization under the policy of Thailand 4.0. Some examples are the adaptation to match with the lifestyle of people, the convenient provision of public information from the digital database for serving people and for

the governance of the country, etc. It is also vital to create high standards in developing the country to be relatively equal to other countries.

### 3) Obstacles in Developing Digital Citizens in Thailand

In developing digital citizenship, several problems and obstacles were found, i.e. education gaps, which are the major obstacles towards the creation of digital citizenship. Thus, the government should pay attention to finding ways for creating an understanding and to creating a tool for providing knowledge to people with poor education about the basic digital society and digital citizenship correspondingly. Besides, a lack of trust on the state's working system driven by digital technology affects people's use of the state services, which leads to the lack of opportunity for driving digital society of the country. What the state should urgently improve is to establish a trust of people in the state's services by digital technology.

Another obstacle against the development of a complete citizen in some countries is a sense of having no freedom. Thus, people ignore to be digital citizens due to their fear of possible online risks they may face in their social participation as citizens, i.e., personal information is stolen in E-commerce, etc., and in all kinds of activities as citizens. All of these induce an opposition against the use of digital media in their social expressions as citizens.

Furthermore, the major obstacle against the development of digital citizenship is that most digital natives in Thailand have no genuine understanding about their rights and duties under the Thai Constitution, which comprises three kinds of citizens: 1) responsible citizens, 2) participatory citizens, and 3) justice-oriented citizens. Therefore, Thai digital natives should possess these three characteristics in balance. However, it was found that Thai digital natives still express these three characteristics in the unbalanced state.

Nevertheless, the digital natives' unstructured but flexible media exposure patterns affect their media exposure and information access behaviors. In other words, digital natives have different skills in the use of digital media, which diffuse rapidly, in the selection of digital devices that suit their needs, in interpretation and connection of data from the digital world, and in their management of information to use in their daily life. Besides, these are the obstacles for implanting the concept of digital citizenship as well.

In short, the contexts related with the digital citizenship in Thailand are state policies congruent with digital citizenship, situations related with digital citizenship in Thai society, and obstacles against the development of digital citizenship in Thailand. Thus, the eco-system of creating digital citizens in Thailand consists of 1) digital natives as human capital in developing the country, 2) the promotion of democratic citizenship in Thailand, 3) digital economy and society of Thailand, 4) technological growth and advancement, 5) education on digital literacy (by formal and non-formal education system), and 6) patterns of digital media usage behaviors of digital natives. All of which affect the proper digital citizenship for Thai digital natives. Thus, they are fundamental factors for developing concepts and attributes of digital citizenship suitable for Thai digital natives. From the abovementioned factors that affect the components of the eco-system of digital citizenship creation, such factors should be used as a foundation for developing the concept and attributes of digital citizens suitable for digital natives by inventing some indicators for them to check and evaluate themselves. Then, they can know of which characteristics or factors they are short and can be stimulated to develop themselves in those certain factors or symptoms. At the same time, this concept can be communicated more effectively if the state or government supports it or let other organizations, accepted by digital natives, to be a direct communicator, to ensure the accessibility to the target group.

#### **6.1.4 Concepts and Attributes of Digital Citizenship Suitable for Digital Natives in Thailand**

For the concepts of digital citizenship, national governance systems or government management must be taken into account. Government governance can reflect conceptual framework and fundamental practices that are connected to the concept and practice of digital citizenship, especially in terms of an individual's rights, duties, and responsibilities as a citizen of the country and as an accepted member of the society. Individuals must connect their identity in the digital to that in the physical world to have a harmonious co-existence.

Furthermore, in democratic governance, Thai people have to live by laws under Thai Constitution since the underlying assumption of being a national citizen is

that Thai people must know and understand the rights and duties in their participation or social practices genuinely. Mainly, Thai citizens can use their potential in the right ways according to the Thai Constitution, and this kind of citizenship is a desirable attribute of digital citizens as well. Accordingly, the concept of digital citizenship requires concern of the rights in information accessibility but with the responsibility in accessing the information and in using and producing data for social participation with a sense of being a part of the society or community, both in the physical and digital world. Additionally, it includes the respect of others' rights by being aware of their roles in the digital world with responsibility in accessing, searching, and applying information in the real world.

From analyzing the support of the government for digital citizenship, it was found that the Thai government has adopted the country towards digitalness for a service through complete digitalization under the policy of Thailand 4.0. Examples are the adaptation to match with the lifestyle of people, the convenient provision of public information from the digital database for serving people and for the governance of the country, etc. It is also essential to create high standards in developing the country to be relatively equal to other countries.

However, most digital natives in Thailand lack an understanding of their rights and duties according to Thai Constitution. In short, digital citizenship of Thailand should possess these three types of citizenship: Responsible Citizen, Participatory Citizen, and Justice-oriented Citizen, in balance. In creating the goal of digital citizenship, it should consider government management, state supports, the context of using digital media, especially of digital natives, and citizenship via digital media. Nevertheless, the goal of creating digital citizenship must be tangible and practical, and should not be only at the awareness level.

#### 1) The Concepts of Digital Citizenship Suitable for Digital Natives in Thailand

The concept of digital citizenship appropriate for digital natives in Thailand means the idea that enables the social practices in the digital world to connect with those in the physical world. Its purpose is to create an immunity to protect oneself and to orient oneself to co-exist with others in harmony under the digital context with leaping and continuous development and changes. In living via all

digital possibilities, digital citizens should have a sense of humanity or manhood, i.e., an awareness of one's rights and responsibilities, being ethical, catching up with social changes, and consideration on the scope of one's and others' rights and freedom. Digital citizens should understand their own identity and be able to use digital media to communicate their status properly with respect of diversity among people. They also can use digital media for lifelong learning to be equipped with various entrepreneurial skills. Besides, they can make use of digital technology towards social participation for public benefits. Digital citizens must be assertive to express their opinions to call for social justice to bring about positive changes to their society.

Furthermore, digital citizens should have an inspiration, be enthusiastic and creative, and know how to use available digital devices and systems towards maximal benefits with public concern. Notably, digital citizens should sacrifice and devote themselves to society as national citizens, world citizens, and digital citizens. Thai core values, i.e., the respect for the elder, the focus on the family institution, etc. should be maintained as they are graceful Thai values and are the foundation that makes people respect others, be kind and helpful. All of these can be applied in the digital world.

## 2) Attributes of Digital Citizenship Suitable in Thai Society

From the analysis of aspects of digital citizenship, they are put into order according to the relationship between digital media usage behaviors and digital citizenship as follow:

### (1) Digital Literacy

Digital literacy means the analytical use of digital technology for receiving and transmitting information by always concerning about its effect on oneself, others, and society with discretion, which leads to social expression and participation in digital society towards the beneficial changes for the nation. Thus, digital citizens should possess all necessary skills to use digital technology with digital literacy (Hobbs, 2010) as follow:

- a) Knowledge of how to acquire the correct information, i.e., the use of devices or software for proper access.
- b) Analysis and interpretation of digital data to respond to the desired utility.

c) Evaluation and classification of information for the appropriate application.

d) The adoption of useful details through proper digital devices to contribute active participation for oneself and society.

e) The induction of creative changes that are useful for society through digital media.

## (2) Digital Communication

For digital citizenship, communication through digital media needs to be transmitted accurately and effectively to achieve the intended goals. The content in communication through digital media should be creative while the proper and suitable channel and the digital device should be selected, based on the public concern mainly. Self-restraint and care of the possible adverse effect of communication caused by digital media are essential. In digital communication, including a participative communication or the creation of content for changing society in Thai context, it is important always to realize that such communication is beneficial for the public as a whole, not for the benefits of only some groups in the society as it may cause a long-term effect.

## (3) Digital Commerce

Digital commerce means the use of digital technology for doing business transactions and online purchase of products, including the use of entrepreneurs to make use of the digital channel for their business. Digital citizens who are service-users need to know how to use it and how to verify all received information from both service-givers and entrepreneurs. Enthusiasm should be enhanced to call for and verify information under the strict surveillance of the government to avoid being deceived or cheated.

Nevertheless, digital citizens, either as service providers or as entrepreneurs, should respect the rules and conduct business with honesty and responsibility, including complying with ethical codes and laws related to E-transactions and E-commerce. On the other hand, the government should clarify how to make use of the database for entrepreneurship so that entrepreneurs can comply with the requirement of E-transactions and commerce, which can stimulate national economic in another way.

#### (4) Digital Etiquette

Digital etiquette means the use of digital technology with a pleasant manner, politeness, and creativity without leaving any inappropriateness in the digital world, i.e., not hurting others' feeling, not damaging others' identity, including having the proper manner in using any device that may affect social expression in the physical world.

Besides, one should realize that to share information on the internet cannot always control other people's privacy in spite of some protection mechanisms. Therefore, one should not share any incorrect information that might damage other people's reputation or welfare, both physically or mentally. It should also be aware of sharing information with some creative digital footprint that might be useful for others and society.

#### (5) Digital Access

Digital access means the ability to access digital technology (technological infrastructure) sufficiently and adequately in terms of digital devices and all facilities. Part of digital access can be adequately provided and widely by the government for equality in society. However, at the same time the government needs to provide clear necessary information to assure people that they can access digital technology widely in both urban and rural area for their uses as national citizens, which has to start with the readiness of technological infrastructure, i.e., connecting networks, stable network integration for public service, etc. To build an understanding on the usage of information through digital system operation and the infrastructure of digital technology prepared by the government, i.e., the use of database from ID number to obtain all governmental welfare and services, is access connected from physical to digital world. It can decrease the technological inequality in some ways. Hence, the government should promote the understanding of these benefits to create people's right attitude towards accessing the state service through digital system operation. It is a part of developing the digital society of Thailand.

Besides the state's support of accessibility to digital technology, people themselves should know the objectives for accessing such technology clearly and thoughtfully for full use that will be beneficial for themselves and their society.

### (6) Digital Laws & Ethics

Digital laws and ethics mean the use of digital technology ethically and legally that is beneficial for the users themselves, for others, and their society. The relevant basic laws and ethics digital citizen should know are copyright law, consumer protection, computer act, human rights, and media ethics. At the same time, the state should manage the issuance of regulations and requirements and enforce them seriously to support the creation of complete digital citizenship. Furthermore, the laws and ethics relating to co-existence in the digital world be contained in the textbooks or educational curriculum to increase people's awareness of these laws. Besides, methods, procedures, or steps of legal actions, including contact channels should be suggested so that people can apply in their daily life when facing such problems.

### (7) Digital Rights & Responsibilities

Digital rights and responsibilities mean the use of digital technology by knowing the limit of their rights in social media and by being responsible for not expressing anything that violates others' rights and privacy. The right to free expression is also the most important thing of digital citizenship, which accords with the fundamental principle of citizenship in general. The awareness of one's a free expression with a concern of human rights, privacy, and the respect of people's diversity is essential but difficult to do, especially the protection of one's privacy to avoid personal risks in parallel to the respect for others' privacy. Personal data should not be posted or disseminated without permission, and it should be aware that any digital expression always requires a digital footprint. Accordingly, digital citizens should be ready to be responsible for their mediated expression whenever it affects others' rights and privacy or when it yields any negative consequence, either intentionally or unintentionally, to society. Consequently, it should always be aware that situations in the digital world cannot still be controlled.

Moreover, digital citizens should concern about their social expression under the accepted values and social practices since in the digital world, users can conceal their real selves, and due to different laws of each country, sometimes, we cannot charge those with misconducts. Accordingly, it facilitates the



freedom to express improperly and to violate others' rights. Thus, digital citizens have to keep these proper rights in mind.

As a consequence, the right to express via digital media should be a beneficial communication for the society as a part of the duties of good citizens of the country. Digital citizens have a right for their social movement, especially towards a positive change in society. It is essential for digital citizen to understand the forms and goals of a social movement that connects with their right of expression.

#### (8) Digital Security

Digital Security means the use of digital technology by knowing a self-defense mechanism against any malevolent conducts, i.e., no reveal of personal data, installation of anti-virus programs, backup of data, and surge control of digital equipment. An understanding of the operating system of digital devices may lead to some personal risks as a citizen according to the democratic system without affecting national security.

Furthermore, the understanding of digital device operation that can lead to personal risks of a consumer is another issue to which digital citizens must pay high attention to their safety. i.e., to provide personal data for downloading free applications or to lend one's digital device to others for connecting or access to information, etc., that can be used for illegal purposes.

Moreover, digital citizens should always be aware that all smart artificial intelligence (AI) can cause a risk towards any crimes or robberies since they can be connected with internet. It becomes a channel for Cyber Crimes.

#### (9) Digital Health & Wellness

It means the use of digital technology by concerning its effect on physical and mental health by choosing information, digital devices, or software that are useful for physical and psychological health and by avoiding using digital technology that causes adverse physical and mental health. Digital citizens should prevent access to content that may damage the mental health of themselves. Besides, they should know how to allocate their time and keep the right balance between the degree of using digital devices and timing for accessing digital media in their physical world so that digital world will not bother their real ways of life.

From the study, the indicators of digital citizenship attributes are proposed as guidelines in promoting digital citizenship for digital natives in Thailand through several approaches. The first approach is the ways of bringing up and cultivating digital citizenship or what should be considered to enable Thai people to be digital citizens to live in society as expected. The other approach is the installation of some self-protection mechanisms as digital citizens or the kind of arrangements or rules enabling people to have a harmonious co-existence in both the physical and digital world. These two approaches can be divided into three guidelines as follow:

- 1) The promotion through education on digital literacy, digital communication, and digital commerce.
- 2) The enhancement of the respects in relations to digital etiquette, digital access, and digital laws and ethics.
- 3) The promotion of self-protection and responsibility or digital rights and responsibilities, digital security, and digital health & wellness.

## **6.2 Discussion**

To discuss the findings of this study in combination with the literature review and theoretical concepts used as the research framework, i.e., Concept of Digital Native, Concept of Digital Behavior, Concept of Digital Literacy, Concept of Citizenship and Concept of Digital Citizenship, three main topics were highlighted.

### **6.2.1 Digital Media Usage Behaviors of Digital Natives in Thailand**

Mcquail (2005, as cited in Parichart Saithanu, 2010) reported the relationship between personality or media usage behaviors and factors influencing ways of the daily life of the consumers. He stated that the habit of an individual's media usage depended on two main factors influenced by social structure: 1) the situation and needs, and 2) external factors, i.e., social context, technological condition, etc., which could reflect social structure and were related to the digital media usage behaviors of digital natives.

From the survey on digital natives' digital media usage behaviors in this research, it was found that the device they used the most was SmartPhone, mostly

used for accessing information. This finding accords with the study of Bu-Nga Chaisuwan and Pornpun Prajaknate (2015) on the new media usage behaviors of teenagers aged 10-19 years old, which found that teenagers at elementary and secondary education level exposed to new media by Line and Facebook through SmartPhone the most.

Regarding the purposes of their media usage, it was found that digital natives used digital media for doing some activities in social media, i.e., post, share, or follow the news on Facebook, Twitter, and Instagram. On the other hand, they viewed VDO clips through YouTube, called or texted their chats through Line, and transmitted their information through emails for their study or online transactions. They chose each platform from the factors of modernity, speed, multi-content, credibility, care and interest, and participation or interactivity. All of these factors were found to be congruent with the purpose of media usage of digital natives, who tended to use multi-platform media increasingly. This finding also accords with the study of Boczkowski et al. (2018), who found that internet users, or new generations in Argentina, used social media with different objectives of communication and types of media function. Most new generations used WhatsApp for sending short texts to their friends and family while using Facebook for disseminating their desired content in the broader sphere. On the other hand, Instagram was used for posting modified photos or images about their daily life, Twitter for receiving the message and expressing their comments, and Snapchat for sending short funny texts to their close friends.

Besides the main objective of using digital media for following up news and information, it was also found that some groups of digital natives did not follow the story as passive users, but as active users. Some groups followed the news to keep themselves in trends or to build an image of being a person who updated all surrounding story. For instance, they often posted their status in congruence with what was happening in the society or with the coming trends or posted their messages to show that they knew what had happened and thus sent it to receive others' feedback or icons expressing their feeling with the content they created. This finding accords with the study of Suppakorn Chudabala (2014), who studied digital fluency of the digital natives. On the other hand, some groups of digital natives did not verify the received news nor create any content with scrutiny. Congruently, in this digital study

literacy was found as the characteristics rated at the lowest level among all digital citizenship characteristics. In other words, they did not verify the facts nor correctness of the received content with other sources while exposing to information in social media since most of their origins came from their friends or acquaintances whom they trusted so they felt no need to verify it.

For the digital natives who created their content as active users, they often expressed themselves as persons who could catch up with what was happening. This group of digital natives would concern about the number of feedbacks received from other users rather than about the benefits other users would gain from their information. Because of this, this influenced these digital natives to use their digital devices to follow all surrounding news so slowly that they became addicted to digital media use. This finding accords with some studies focusing on media usage to follow the trends in society. Panuwat Kongrach (2011) and Przybylskia, Murayama, DeHaan, and Gladwell (2013) found that the SmartPhone addiction may be caused by the users' fear of missing out or FoMo, which happened in social media. Typically, persons who have Fomo syndrome will be very anxious that others will find some exciting news before them. If this syndrome is continued for a long time, it will be developed to be "Nomophobia" or the fear of being out of SmartPhone contact.

Another risk found in the digital world was the exposure to inappropriate content that might affect users' mental health. Generally, to expose to violent or pornographic content can affect mental health. Digital natives may feel against or feel along with such improper content. After long exposure to this kind of content, they may find ways to express themselves to release their emotion in both digital and physical worlds. This finding accords with the study of Niphon Darawuttimaprakorn (2015) aimed to understand teenagers' sexual behaviors by analyzing the relationship between sexual acts and digital media usage behaviors. The result showed that the dissemination of pornographic content in internet stimulated teenagers to pay more attention to sexual activity, to arouse sexual needs more quickly through their sensory organism, and to use social media as a communication channel leading to their sexual intercourses and their preference to group sex.

Nevertheless, from the finding on the digital media usage behaviors in a broad view, it was found that digital natives felt they had high expertise in the digital world. However, when classifying the expertise by issues, it was found that their expertise was just at the level of having basic knowledge about the use of digital devices and applications or how to choose tools, applications, and programs to serve their purposes. For instance, they knew how to respond to their ways of life or to facilitate the conduction of their specific-interest activities until they could apply the use of digital devices and applications for other purposes beyond their use in daily life. Remarkably, the digital natives' perception of themselves as having high expertise can lead to "risks" in the digital world as well since they will use their digital knowledge to create inappropriate content that will be harmful to themselves and for others, especially their shares and comments without consideration or restraint. This accords with the findings of Chawaporn Dhamanitayakul and Nudee Nupairoj (2015), which found that the youth at the secondary education level had behavioral and emotional development that related with the media usage behavior and frequency of exposing to improper media content, which could be just a viewing or sharing, because of social trends, friends or their curiosity. The researchers thus suggest that to develop digital literacy in each skill of the youth at this range of age ought to be trained to enhance their democratic citizenship. A democratic digital citizen should be able to catch up with the advancement of digital media and information processing, inhibit and control their emotion or emotional quality in response to what is perceived, and to have the knowledge to support their creative thinking, decision-making, responding, and participation democratically.

To post or comment on any ideas with inappropriate or improper words to others in social media is widely found in social media. Some people, mostly digital natives at the secondary education level, like to post or share their improper behaviors and cyberbullying behaviors on social media and to use "Hate Speech" in the digital world. This notion is supported by the study of Pawanee Janekitiworapong and Pattama Suwanpakdee (2018), which found the positive relationship between content filled with hatred and the attitude of using hate speech of Thai teenagers in Bangkok via Facebook.

From this study, it is remarkable that digital natives still lacked an understanding of the correct meaning of “individual rights” genuinely by understanding that they could express inappropriate message on their personal space in social media and perceive such space as belonging to them so they could show anything, even the illegal content or photos. Seemingly, they knew their rights but lacked their responsibility and concern on the effect or consequences, i.e., to post their images while taking drugs playfully. Such behaviors were also found in the study of the National Institute of Development Administration (NIDA), which a number of improper practices in digital media caused by the users' misperception of their rights were found the most, followed by their desire to have a trial, to be acknowledged by others, to get money, and by their curiosity respectively.

Moreover, another interesting finding was that digital natives preferred using digital media to respond to personal interests of their age and most of them accessed digital technology through the service of private sectors mainly with a purpose for exchanging information and E-commerce with digital literacy. All of these characteristics of digital citizenship were found to have a relationship with digital media usage behaviors at a moderate level. This accords with the study of Saowaphark Lampetch (2016) and with the survey of NIDA poll (the National Institute of Development Administration) (2016), which found that most samples used social media for entertainment (listen to music, watch movies, play games) the most, followed by queries for searching for information, chats with friends, posts of their texts, photos, VDO, E-commerce, and Live-VDO respectively.

In short, from the finding of this research analyzed by the digital media usage behaviors, it illustrates that digital natives in Thailand do not reflect their digital citizenship as active citizens despite the perception of their digital expertise at the high level. On the contrary, the relationship between their digital knowledge and their digital citizenship is at the moderate level only. In other words, Thai digital natives have not applied their digital expertise for social benefits or social changes as much as they should have. In general, they use digital media mostly for accessing information or for their interests. Similarly, Lusk (2010) found that teenagers tended to use digital media for solving their problems in daily life. He suggested creating a pleasant

environment in social media so that digital natives could gain the maximum benefits and this could help to reduce risks that might occur in the digital world.

### **6.2.2 The Development of Concepts and Attributes of Appropriate Digital Citizenship in Thai Society Context**

The concept of digital citizenship is based on good citizenship according to the concept of Westheimer and Kahne (2004, pp. 237-269), which can be divided into three types: Personally Responsible Citizen, Participatory Citizen, and Justice-Oriented Citizen. One remarkable notion from this study is that digital citizenship of Thai digital natives is different or varied by ranges of their ages. Digital natives aged between 15-18 years old know the necessary theoretical knowledge of digital citizenship through their formal education, but they cannot apply such knowledge into practice or action. Namely, they cannot realize that what they are doing is civic duty or they have to perform their acts as responsible good citizens. The basic knowledge they know is to be accountable for themselves by respecting the rules and regulations of media usage, either formulated by their families or by Information Service Providers (ISP). Therefore, they realize that those rules are good things to do. This notion accords with the study of Wood (2009), which tried to find the definition of an active citizen from the perception of 93 teenagers aged 14-16 years old in East Midlands, England. He found that the samples defined "active citizen" as a status of members of the society and as primary responsibilities for the nation. However, they did not deeply understand its meaning, especially in terms of its relations with political literacy.

For the findings on the digital citizenship of Thai digital natives aged 19-22 years old, the digital natives of this range of age understand the digital citizenship more deeply than the first group of aged 15-18 years old, mostly from their formal education as well. This group can criticize about their rights as citizens and be responsible for their duties in relations to social expression through digital media, including concerns about the consequences of misusing digital media. They start to use digital media for participation in their learning or in helping their family but not at the societal level yet. Furthermore, they use digital media in the way of maintaining justice in society on the issue of proximity and the current issues in the nation. They

perceive that their citizenship as a social agent is too far for them. From these findings, it reflects that the cultivation and education of citizenship are segmented or separated from digital citizenship. Therefore, it is necessary to cultivate and educate them about digital citizenship as well because we cannot avoid living without all digital possibilities.

Thus, it can be summarized from the findings on the usage of media as citizens that in Thai society context, the level of media usage of Thai digital natives has not reached the level of media usage as participatory citizens and justice-oriented citizens yet. Accordingly, to cultivate Thai digital natives to be citizens who can bring about positive social changes is essential, which can be developed as guidelines for enhancing digital citizenship appropriate for Thai society in the future. From the study on Digital Citizenship Scales of Choi (2016), he developed such scales for measuring the competence, perception, and the level of social participation in Internet-based activities of students in various contexts to find guidelines for teaching his students to be active citizens from the measurement of their digital citizenship. The results from the analysis showed that their skills in technological use and awareness of its effect on their community and the world were the most comfortable things for them. On the other hand, other skills are required for being good digital citizenship, i.e. being a network representative towards social changes, possessing analytical thinking skills, joining political movement through internet, etc. seemed to be challenging to practice and needed a development as they are parts of desirable skills of active citizens, which these students still missed.

Besides, to set any principal goal towards appropriate digital citizenship for Thai society context, it is essential to concern about political governance systems, values, and cultures as proposed by Jones and Mitchell (2015) that the primary goal of digital citizenship covers a broad variety of patterns and scopes in different contexts. Therefore, under the democratic governance with Thai ways of life and values, the creation of digital citizens who can make use of digital benefits for their survival in a society should be concerned. These digital citizens need to be capable of adapting themselves to digital diverse society condition with media literacy and be ready to have a lifelong learning so that they can become the citizens with unique cultural



identity and can maintain core values of Thai society, including having social participation for public benefits and expressing themselves for justice in the nation.

Correspondingly, digital citizens should concern about their rights in accessing information driven by digital world with responsibilities in accessing, using, and producing data in social participation with a sense of being a part of both physical and digital community. Additionally, they should respect others with an awareness of their roles in the digital world. Thai citizens have to know and understand their rights and duties in their social participation or practices correctly by using their potential to comply with Thai Constitution and with the characteristics of desirable digital citizenship in the digital world. It is in congruence with the guidelines of the International Society for Technology in Education (ISTE, 2016). ISTE states that complete digital citizenship for students should be the following type of persons: 1) a person who understands humanness, cultural and social issues related to technology, including ethical and legal practices, 2) a person who can use information and techniques in a fair, safe, legal, and responsible way, including being able to use them positively to facilitate all cooperation or to produce creative outcome, 3) a person who is responsible for himself or herself in lifelong learning, and 4) a person who possesses leadership as digital citizens.

In short, digital natives as digital citizens should make use of their digital context to survive in society, and they should possess the following characteristics:

- 1) have a sense of humanness
- 2) conduct their lives in moral and ethical ways (digital-life ethics)
- 3) be creative and have an inspiration
- 4) have a public mind
- 5) possess a positive identity
- 6) have basic technology savvy
- 7) be responsible for their conduct in the digital world
- 8) know their rights while respecting others' rights

The cultivation of digital citizenship is the urgent issue that should be paid high attention by all sectors concerned since technologies change very rapidly while digital natives are significant forces in helping develop the digital society of the country, which affects the national developments in all dimensions. If Thailand can

develop digital facilities progressively and rapidly but lack a human-resource development to produce complete digital citizens, this will then be obstacles against the whole digital economics and society. Consequently, in developing digital citizenship, all parties: state, private, networks, and family should cooperate in cultivating digital citizenship through various ways to reach target groups in parallel to a provision of knowledge on digital citizenship in Thai society context. Jones and Mitchell (2015) further proposed that in the educational setting, digital citizenship should be taught in class. Notably, some studies found that participation as citizens through online communication had a negative relationship with unsafe digital media usage behaviors but had a positive relationship with creative digital media usage. Accordingly, an education on digital citizenship is vital to stimulate digital use in a creative way for society.

Besides education, the mobilization of digital citizenship, a solid support towards national policies is still an urgent agenda. Every party should understand and see its importance of the creation of digital citizenship of the nation in combination with the enhancement of digital literacy, including implementing the policies appropriately by the scope of their work and responsibilities. Furthermore, this study found that in Thailand the concept of digital citizenship has not widely been implemented as national policies; however, this problem is not witnessed only in Thailand but also in many countries in Asia. In 2015, UNESCO found that countries in the Asia-Pacific region still have had no control and evaluation system for digital citizenship, including no transparent systems and procedure in promoting digital citizenship. Hence, the government offices responsible for the implementation of such policies should pay attention to the perception of children and the youth on the proper occasion and possible risks they may encounter in using digital media and enhance their digital literacy skills in parallel to the creation of functional characteristics of digital citizenship.

Still, though this research found that the digital media usage behaviors of digital natives at present are related to digital citizenship in several dimensions, the relationship is at low to moderate level. Therefore, all those concerned offices might trace back to reconsider the digital-technology use of digital natives to see where the

problems are to correct and re-design the desirable patterns of technology use for digital natives at present to enhance their digital citizenship to be complete.

In terms of the theoretical framework, although the studies abroad explain about digital citizenship attributes that can be measured, these attributes ought to be revised to be appropriate for Thai society. For instance, from the findings, it was found that the attributes in digital laws and ethics, digital rights and responsibilities, digital security, and digital health and well-being had a low relationship with digital citizenship. It may be because these attributes are universal; therefore, the criteria for indicating (indicator criteria) of these attributes or components of digital citizenship should be revised to accord with the Thai society context. For examples, the spiritual, ritual, or religious dimension may be added. Another interesting indicator of this finding is the measurement of proximity and interaction of digital native networks that may enhance their citizenship through digital media. Thus, if digital natives are intimate with the network members whose digital citizenship is active, it can open a high opportunity for those digital natives to absorb such digital citizenship from them as well.

## **6.3 Recommendations**

### **6.3.1 Guidelines for Developing Appropriate Digital Citizenship for Thailand**

The development of digital citizenship appropriate for Thailand requires the operation of many concerned parties: government sectors as the policymakers, education institutions as a cultivation institution for providing knowledge to children and the youth, and family institution as the principal socialization agent of children and the youth as well.

In brief, guidelines for developing digital citizenship, the parties that play a significant role are as follow:

- 1) Government

Sectors Government sectors are responsible for determining core policies in developing digital citizenship by focusing on digital safety and policies related to an individual's privacy. For doing so, it requires personnel from various

parties to help collaboratively to develop digital citizenship. Such offices are responsible for coordinating the cooperation from other parties in allocating budgets for conducting activities to induce national research on the focused issues, including evaluating the effectiveness and efficiency of the programs or of the policies in creating digital citizenship.

One of the major activities the government sectors should conduct is to promote the safe and creative use of online media with responsibilities for themselves and society. The implementation of policies should be done as planned and evaluated by various groups of partners of alliances to create broader awareness in the community.

For technological dimension, the government sectors should increase the accessibility of children and the youth towards the use of computer and digital devices, including providing an opportunity to use various kinds of digital media to develop their digital skills and to learn about digital safety and private-data protection. In spite of the inability of the government sectors for providing infrastructure for every group of people, they should contribute to at least some groups, i.e., to encourage an equal chance for children aged 0-8 years old at every level of education, etc.

## 2) Media Institution

Mass media plays a role as a surveillance guard for the society by presenting facts and describing what is happening in the nation; thus, their leading roles in digital citizenship are classified under digital laws and ethics, exceptionally professional ethics. Mass media should present the content promoting digital citizenship to respond to the needs of viewers' reception and their digital content through different styles of media. Besides, they should connect the awareness of digital citizenship via their presentation of news and opinions to the public to create a familiar feeling of patriotism, including being a public sphere for creating social participation and mobilization.

## 3) Education Institution

The critical roles of education institutions are to provide knowledge about online usage and participation in online media, including cultivating ethical and

responsible media usage behaviors, protecting against digital risks, and enhancing the value of proper digital media usage through the following guidelines:

(1) Educational institutions should have a policy for encouraging students to have digital literacy via their devices as now they use mobile phones as their communication devices increasingly.

(2) They should contain the necessary skills of technological use in the curriculum that teach them about digital citizenship skills and the responsible, effective, and safe use of digital media. Besides digital literacy, they should promote them to be able to use digital media for their learning and understanding of changing the environment.

(3) Learners should be encouraged to participate in the digital world and to use digital media for their acquisition of information, for game-playing, and as a communication tool. Besides, they should be taught that in all digital possibilities: content creation, online interaction, chats, message delivery, communication, photo albums, etc., there are both opportunities and risks at the same time. Therefore, users of every age should be educated on digital citizenship in all dimensions equally; however, the depth of knowledge will vary by a range of ages.

(4) Education institutions should promote the teachers to be active in digital health and wellness. Training should be arranged for teachers to let them be aware of necessary skills for the creation of digital citizenship so that teachers can integrate these issues into their courses properly to help students to understand the impact of technology use and to decrease any possible risks to their health.

(5) Education institutions should have a curriculum that promotes Wellness in the digital world in addition to digital literacy knowledge and digital citizenship. The Ministry of Education should promote the safe and creative use of digital media. The more skillful the learners are; the more benefits they can gain from the use of digital media. Besides, they should be able to avoid or encounter digital risks properly.

(6) Education institutions should promote digital natives to have basic knowledge of laws related to the use of digital technologies by containing such issue into their curriculum to establish the knowledge base for the youth. At present, mass media is the principal mechanism or learning sources on Computer Act. Still,

education institutions should play a part in the provision of knowledge seriously as well.

(7) Education institutions should educate the community on the Responsible and effective use of digital media to collaboratively create a safe environment for children and the youth. Otherwise, it will limit their capability in communicating about this issue with their parents and teachers. The curriculum in combination with special activities involving this issue can give a chance for children and the youth to participate increasingly under the safe environment. Especially, the curriculum should provide a chance for them to exchange their experiences of digital risks that they may encounter, i.e., cyberbullying, improper media exposure, participation with the online community, an encounter with strangers in the digital world, media creation, and the development of digital skills and digital competency.

#### 4) Parents

Parents should know computer and internet so that they can give advice and surveil their children. Besides, they can play a role of cultivating the use of digital media in a creative, safe, and polite way with responsibility for their words, writing, and action in digital media. They also should cultivate their children towards digital citizenship and digital literacy. In other words, they have to teach them to “use,” “understand,” and “create.” Parents should perform as a mediator of their children’s digital use. Typically, the leading roles of parents are to screen the content to prevent them from accessing to inappropriate content, to limit their time on the screen, to protect and decrease children's improper behaviors, i.e., pornographic photos and content, games, and addiction to digital media, etc.

### **6.3.2 Recommendations for Future Studies**

1) To test the preliminary model of digital citizenship appropriate for Thailand synthesized mainly from qualitative research and supported partly by quantitative methodology in this study, the more thorough studies by both qualitative and quantitative research should be conducted so that more complete and proper model suitable for Thai society context can be created and redesigned.

2) The relationship between digital citizenship of other ranges of ages in different areas should be investigated to find components of digital citizenship suitable for the age and region.

3) The indicators for measuring digital literacy of other groups besides digital natives' generation, which is appropriate with digital literacy, should be developed.

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## **APPENDICES**

## APPENDIX A

### QUESTIONNAIRE

#### “Digital Behavior and Level of Digital Citizenship of Digital Natives in Thailand”

I am currently pursuing PhD at Graduate School of Communication Arts and Management Innovation, National Institute of Development Administration (NIDA). The purposes of my study are to measure the level of digital citizenship among digital natives in Thailand and to investigate the relationship between Thai digital natives’ digital behavior and the level of digital citizenship. Your attitudes and opinions as well as digital behavior and the level of digital citizenship are critical to the success of this study. I recognize the value of your time, and sincerely appreciate your efforts on my behalf. Individual responses are anonymous and will be held in confidence. Please take some minutes to complete this survey and submit it at your earliest convenience. Thank you for your time.

##### **PART I: Personal Information of the Respondents**

##### **1. Sex**

- 1) Male                       2) Female                       3) Alternative sex (optional)

##### **2. Age (years)**

- 1) 15 – 18                       2) 19 – 22                       3) 23 – 24

##### **3. Occupation**

- 1) Secondary school students                       2) Higher-education Students  
 3) Government officers                       4) Private-company workers  
 5) Entrepreneurs                       6) Others

##### **4. Level of Education**

- 1) Lower than early or lower secondary  
 2) Early/ lower secondary (Junior high school)  
 3) High/ upper secondary (senior high school) /high vocational certificate)  
 4) Vocational certificate  
 5) Undergraduate (Bachelor’s degree)  
 6) Graduate (higher than bachelor’s degree)

**5. Educational System**

- 1) Formal education                       2) Non-formal education

**6. Average monthly salary (Baht)**

- 1) Lower than 5,000                       2) 5,000 – 10,000                       3) 10,001 – 15,000  
 4) 15,001 – 20,000                       5) Higher than 20,000

**PART II: Digital Media Behaviors****7. Total length of time using digital media**

- 1) Less than 1 hour     2) 1 - 2 hours                       3) 3 - 4 hours  
 4) 5 - 6 hours                       5) 7 - 8 hours                       6) More than 8 hours

**8. Mode of the Internet Connection**

- 1) Wi-Fi                       2) 3G                       3) 4G

**9. The places where you use their digital media (The answer can be more than one)**

- 1) Residence                       2) Schools/university/offices                       3) Game shop  
 5) Internet Café                       6) Residence of friends/acquaintance/cousins  
 7) Public IT center/ library  
 8) Outdoor via portable computer/mobile phone

**10. The first 3 most use digital devices (Please Rank 1-3)**

- 1) Smartphone                       2) Tablet                       3) Notebook  
 4) Laptop                       5) Smart TV                       6) Others

**11. Level of digital media usage behaviors**

Digital Media Usage Behavior	Level of Digital Media Usage Behaviors				
	Very High (5)	High (4)	Mode-Rate (3)	Low (2)	Very Low (1)
<b>1) Level of Expertise</b> 1.1) You can use digital devices (i.e. Smartphone, computer, tablet, etc.) and technology (i.e. programs and applications) well.					

Digital Media Usage Behavior	Level of Digital Media Usage Behaviors				
	Very High (5)	High (4)	Mode-Rate (3)	Low (2)	Very Low (1)
1.2) You can search for information from digital media well					
1.3) You can use the Search Engine well					
1.4) Upon the receipt of online information, you can analyze and classify information well.					
1.5) You can classify and verify the correct online information well					
1.6) You often create or write the content by yourself via digital media					
1.7) You like to post your images, VDO clips, status, and others about yourself					
1.8) You often share information appropriately					
<b>2) Level of Online Participation as a Citizen</b>					
2.1) You are confident that your images, VDO clips, and status are useful for viewers.					
2.2) You often verify the information before sharing or posting it to others					
2.3) In sharing information, images, or posting any statements, you will concern about ethics and social responsibility without damaging any					

<b>Digital Media Usage Behavior</b>	<b>Level of Digital Media Usage Behaviors</b>				
	<b>Very High (5)</b>	<b>High (4)</b>	<b>Mode-Rate (3)</b>	<b>Low (2)</b>	<b>Very Low (1)</b>
reputation or ways of living.					
2.4) You often like to copy others' online statement without reference					
2.5) You will think of ethics and social responsibility in using proper words, language, and ways of expression.					
2.6) Your use of digital devices aims to facilitate or help to solve problems of your studying or your working.					
2.7) Your use of digital devices aims to facilitate your family problems, i.e. to use online information to solve family problems, or to use online suggestions to solve health problems for family members, etc.					
2.8) You often use online service for voting to support, oppose, or express your ideas as a member of the society for the benefits of the community, the nation, or the world.					
2.9) You create Page or websites for the benefits for your friends, your school, community, nation, and the world.					

### PART III: Level of Digital Citizenship

#### 12. Level of Digital Media Usage Behaviors

Level of Digital Citizenship	Level of digital media usage behaviors				
	Very High (5)	High (4)	Mode-Rate (3)	Low (2)	Very Low (5)
<b>1) Digital Access</b>					
1.1) You have a modern communication device					
1.2) You think that you will have a chance to use modern technology					
1.3) You can use internet service with wide coverage.					
1.4) You think you are ready to move toward digital citizenship					
<b>2) Digital Commerce/ online purchase</b>					
2.1) You think at present to purchase products online is normal for technology users.					
2.2) You think a product online purchase is safe.					
2.3) You think both sellers and buyers understand rules and laws of online transactions well.					
2.4) You like online transactions					
<b>3) Digital Communication/ Information exchange via digital media</b>					
3.1) You think at present there has been a variety of communication					



Level of Digital Citizenship	Level of digital media usage behaviors				
	Very High (5)	High (4)	Mode-Rate (3)	Low (2)	Very Low (5)
choices i.e. emails, mobile phones, etc.					
3.2) When you want to communicate with others, you prefer using digital media, i.e. Facebook, Line, etc. as the first priority.					
3.3) You think you can choose to use digital media appropriately for time and places.					
3.4) You feel happy to share information, images via digital media for others to see.					
3.5) You know digital media have both good and bad points.					
3.6) You like to find new friends and talk to strangers on digital media.					
3.7) You can present your real self on digital media.					
3.8) When you do any activity, you often share it or post information for others to acknowledge.					
<b>4) Digital literacy</b>					
4.1) You can select to choose digital devices and programs adroitly					
4.2) You can always use certain devices to share information properly.					
4.3) You can understand information from digital media well.					

Level of Digital Citizenship	Level of digital media usage behaviors				
	Very High (5)	High (4)	Mode-Rate (3)	Low (2)	Very Low (5)
4.4) You can analyze the use of online information well.					
4.5) You can analyze the credibility of online information well.					
4.6) You can distinguish online information between opinions and facts.					
4.7) You can evaluate the impact possibly caused by online information.					
4.8) You are confident when posting images, VDO clips, status, or anything about yourself.					
4.9) You use your own creativity in modifying statements, images, and VDO clips of yourself.					
4.10) You always know what you want from posting images, status, or anything about yourself.					
4.11) You always realize that your images, VDO clips, and status will be beneficial for viewers.					
4.12) You know how to use technologies (study information, use applications for editing) to help create your status, images, and VDO clips.					
4.13) In expressing your ideas online, you will always think of ethics and					

Level of Digital Citizenship	Level of digital media usage behaviors				
	Very High (5)	High (4)	Mode-Rate (3)	Low (2)	Very Low (5)
social responsibility for not causing any effect on others' reputation or their ways of living.					
<b>5) Digital Etiquette</b>					
5.1) You often enter creative and useful websites.					
5.2) You often write your online statements or content with polite language.					
5.3) You think that you have a good manner in using digital or online media.					
5.4) You think that you use communication devices at the right place and right time.					
5.5) You often use communication devices in the classroom or in a meeting.					
<b>6) Digital Laws and Ethics</b>					
6.1) You think that to download free songs and movies on the internet is illegal.					
6.2) You think that to use others' ID or to disguise yourself as others is illegal.					
6.3) You think that to publicize images/ statements without reference					

Level of Digital Citizenship	Level of digital media usage behaviors				
	Very High (5)	High (4)	Mode-Rate (3)	Low (2)	Very Low (5)
is common and is not wrong.					
6.4) You think a Hacker is a competent person in spite of his or her illegal action.					
6.5) You think you have good knowledge about digital laws.					
<b>7) Digital Rights and Responsibilities</b>					
7.1) Every person has freedom in doing anything on the internet.					
7.2) When you are displeased with something, you always post it on online media.					
7.3) You always respect others' rights of privacy on the internet.					
7.4) You think that Digital users should have a social responsibility.					
7.5) You think that digital users should respect their own and others' rights.					
7.6) In expressing your ideas on internet, you will think of ethics and social responsibilities by selecting proper words, language, and ways of expression.					
<b>8) Digital Health and Wellness</b>					
8.1) You think too long use of mobile					

Level of Digital Citizenship	Level of digital media usage behaviors				
	Very High (5)	High (4)	Mode-Rate (3)	Low (2)	Very Low (5)
phones, tablets, or computer affects eye safety.					
8.2) You think too long use of digital media affects both physical and mental health.					
8.3) You think you can limit your time of using digital media properly.					
8.4) You have ways of taking care of your health from too long use of digital media.					
<b>9) Digital Security (Self-Protection)</b>					
9.1) You install an anti-virus program to protect your digital devices or equipment.					
9.2) You often scan virus and save your data.					
9.3) You know how to protect from virus					
9.4) You do not reveal your personal data on online media.					
9.5) You have your username and password in entering the computerized or communication system.					
9.6) You always change your password.					

**Suggestions:**

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**---THANK YOU---**

## **APPENDIX B**

### **ITEM-OBJECTIVE CONGRUENCE (IOC) EVALUATION**

The Index of Item-Objective Congruence (IOC) was used so as to find the content validity. In this process, the questionnaire was checked by three experts in field of Digital Citizenship promoting and Media, Information and Digital Literacy including,

1. Assoc. Prof. Lucksana Klaikaew, Ph.D.  
Director of Master of Communication Arts Program,  
Rangsit University
2. Nudee Nupairoj, Ph.D.  
Media Literacy Expert and Lecturer, Communication Arts  
Department (International Program), Rangsit University
3. Ms. Suthatip Larpsompop  
Academic Officer, Child and Youth Media Institute (CYMI)

The Item-Objective Congruence (IOC) was used to evaluate the items of the questionnaire based on the score range from -1 to +1.

Congruent = + 1 Questionable = 0 Incongruent = -1

The items that had scores lower than 0.5 were revised. On the other hand, the items that had scores higher than or equal to 0.5 were reserved. However, the questionnaire was applicable as the evaluation results of every item were above 0.5 as shown in the following table.

Items	Expert's Evaluation			Average Result
	1	2	3	
<b>1. Personal data</b>				
1) 1) Sex	1	1	1	1
2) Age (years)	1	1	1	1
3) Occupation	1	1	1	1
4) Level of Education	1	1	1	1
5) Average monthly salary (Baht)	1	1	1	1
<b>2. Digital Media Usage Behavior</b>				
1) Total length of time using digital media	1	1	1	1
2) Mode of Connection to the Internet	1	1	1	1
3) The place where the respondents used their digital media	1	1	1	1
4) Digital device used	1	1	1	1
<b>3. Level of Digital Media Expertise</b>				
1) You can use digital devices (i.e. Smartphone, computer, tablet, etc.) and technology (i.e. programs and applications) well.	1	1	1	1
2) You can search for information from digital media well	1	1	1	1
3) You can use the Search Engine well	1	1	1	1
4) Upon the receipt of online information, you can analyze and classify information well.	1	1	1	1
5) You can classify and verify the correct online information well	1	1	1	1
6) You often create or write the content by yourself via digital media	1	1	1	1



Items	Expert's Evaluation			Average Result
	1	2	3	
7) You like to post your images, VDO clips, status, and others about yourself	1	1	1	1
8) You often share information appropriately	0	1	1	0.67
<b>4. Level of online participation as a citizen</b>				
1) You are confident that your images, VDO clips, and status are useful for viewers.	1	1	1	1
2) You often verify the information before sharing or posting it to others	1	1	1	1
3) In sharing information, images, or posting any statements, you will concern about ethics and social responsibility without damaging any reputation or ways of living.	1	1	1	1
4) You often like to copy others' online statement without reference	1	1	1	1
5) You will think of ethics and social responsibility in using proper words, language, and ways of expression.	1	1	1	1
6) Your use of digital devices aims to facilitate or help to solve problems of your studying or your working.	1	1	1	1
7) Your use of digital devices aims to facilitate your family problems, i.e. to use online information to solve family problems, or to use online suggestions to solve health problems for family members, etc.	1	1	1	1
8) You often use online service for voting to support, oppose, or express your ideas as a member of the society for the benefits of the community, the nation, or the world.	1	1	1	1

Items	Expert's Evaluation			Average Result
	1	2	3	
9) You create Page or websites for the benefits for your friends, your school, community, nation, and the world.	1	1	1	1
<b>5. Level of Digital Citizenship</b>				
<b>1) Digital Access</b>				
1.1) You have a modern communication device	1	1	1	1
1.2) You think that you will have a chance to use modern technology	1	0	1	0.67
1.3) You can use internet service with wide coverage.	1	1	1	1
1.4) You think you are ready to move toward digital citizenship	1	0	1	0.67
<b>2) Digital Commerce/ online purchase</b>				
2.1) You think at present to purchase products online is normal for technology users.	1	1	1	1
2.2) You think a product online purchase is safe.	1	1	1	1
2.3) You think both sellers and buyers understand rules and laws of online transactions well.	1	1	1	1
2.4) You like online transactions	1	1	1	1
<b>3) Digital Communication/Information exchange via digital media</b>				
3.1) You think at present there has been a variety of communication choices i.e. emails, mobile phones, etc.	1	1	1	1
3.2) When you want to communicate with others, you prefer using digital media, i.e. Facebook, Line, etc. as the first priority.	1	1	1	1

Items	Expert's Evaluation			Average Result
	1	2	3	
3.3) You think you can choose to use digital media appropriately for time and places.	1	1	1	1
3.4) You feel happy to share information, images via digital media for others to see.	1	1	1	1
3.5) You know digital media have both good and bad points.	1	1	1	1
3.6) You like to find new friends and talk to strangers on digital media.	1	1	1	1
3.7) You can present your real self on digital media.	0	1	1	0.67
3.8) When you do any activity, you often share it or post information for others to acknowledge.	1	0	1	0.67
<b>4) Digital literacy</b>				
4.1) You can select to choose digital devices and programs adroitly	1	1	1	1
4.2) You can always use certain devices to share information properly.	1	1	1	1
4.3) You can understand information from digital media well.	1	1	1	1
4.4) You can analyze the use of online information well.	1	1	1	1
4.5) You can analyze the credibility of online information well.	1	0	1	0.67
4.6) You can distinguish online information between opinions and facts.	1	1	1	1

Items	Expert's Evaluation			Average Result
	1	2	3	
4.7) You can evaluate the impact possibly caused by online information.	1	1	1	1
4.8) You are confident when posting images, VDO clips, status, or anything about yourself.	1	1	1	1
4.9) You use your own creativity in modifying statements, images, and VDO clips of yourself.	1	1	1	1
4.10) You always know what you want from posting images, status, or anything about yourself.	1	1	1	1
4.11) You always realize that your images, VDO clips, and status will be beneficial for viewers.	1	1	1	1
4.12) You know how to use technologies (study information, use applications for editing) to help create your status, images, and VDO clips.	1	1	1	1
4.13) In expressing your ideas online, you will always think of ethics and social responsibility for not causing any effect on others' reputation or their ways of living.	1	1	1	1
<b>5) Digital Etiquette</b>				
5.1) You often enter creative and useful websites.	1	1	1	1
5.2) You often write your online statements or content with polite language.	1	1	1	1
5.3) You think that you have a good manner in using digital or online media.	1	1	1	1
5.4) You think that you use communication devices at the right place and right time.	1	1	1	1
5.5) You often use communication devices in the classroom or in a meeting.	1	1	1	1

Items	Expert's Evaluation			Average Result
	1	2	3	
<b>6) Digital Laws and Ethics</b>				
6.1) You think that to download free songs and movies on the internet is illegal.	1	1	1	1
6.2) You think that to use others' ID or to disguise yourself as others is illegal.	1	1	1	1
6.3) You think that to publicize images/ statements without reference is common and is not wrong.	1	1	1	1
6.4) You think a Hacker is a competent person in spite of his or her illegal action.	1	1	1	1
6.5) You think you have good knowledge about digital laws.	1	1	1	1
<b>7) Digital Rights and Responsibilities</b>				
7.1) Every person has freedom in doing anything on the internet.	1	1	1	1
7.2) When you are displeased with something, you always post it on online media.	1	1	1	1
7.3) You always respect others' rights of privacy on the internet.	1	1	1	1
7.4) You think that Digital users should have a social responsibility.	1	1	1	1
7.5) You think that digital users should respect their own and others' rights.	1	1	1	1
7.6) In expressing your ideas on internet, you will think of ethics and social responsibilities by selecting proper words, language, and ways of expression.	1	1	1	1
<b>8) Digital Health and Wellness</b>				
8.1) You think too long use of mobile phones, tablets, or computer affects eye safety.	1	1	1	1

Items	Expert's Evaluation			Average Result
	1	2	3	
8.2) You think too long use of digital media affects both physical and mental health.	1	1	1	1
8.3) You think you can limit your time of using digital media properly.	1	1	1	1
8.4) You have ways of taking care of your health from too long use of digital media.	1	1	1	1
<b>9) Digital Security (Self-Protection)</b>				
9.1) You install an anti-virus program to protect your digital devices or equipment.	1	1	1	1
9.2) You often scan virus and save your data.	1	1	1	1
9.3) You know how to protect from virus	1	1	1	1
9.4) You do not reveal your personal data on online media.	1	1	1	1
9.5) You have your username and password in entering the computerized or communication system.	1	1	1	1
9.6) You always change your password.	1	1	1	1

## APPENDIX C

### RELIABILITY OF THE QUESTIONNAIRE

The reliability of the questionnaire was assessed by using Cronbach Alpha method. To ensure that the responses collected through the instrument were reliable and consistent. The pilot test was conducted by an online questionnaire with 30 Digital Natives who were not included in the actual data collection. The reliability value was calculated by using Cronbach's alpha to ensure whether there was internal consistency within the items. According to George and Mallery (2010)

Therefore, for the research questionnaire to be reliable, its value of Coefficient Cronbach's Alpha must be at least 0.70. From the pilot test, the value of Coefficient Cronbach's Alpha was 0.913 with the average range of each question of 0.912-0.917, or values of higher than 0.70; thus, the questionnaire was highly reliable.

#### Reliability Statistics

Cronbach's Alpha	N of Items
.913	72

#### Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
d1	251.00	541.862	.201	.913
d2	251.17	544.282	.149	.913
d3	251.03	533.344	.417	.911
d4	251.93	541.651	.160	.913
d5	251.73	537.582	.260	.912

	<b>Scale Mean if Item Deleted</b>	<b>Scale Variance if Item Deleted</b>	<b>Corrected Item-Total Correlation</b>	<b>Cronbach's Alpha if Item Deleted</b>
d6	251.00	535.241	.429	.911
d7	251.13	532.671	.440	.911
d8	251.23	527.013	.462	.911
d9	251.33	546.437	.055	.914
d10	251.80	525.890	.541	.910
d11	252.33	530.989	.314	.912
d12	250.83	542.282	.157	.913
d13	250.93	528.271	.506	.910
d14	251.10	534.231	.430	.911
d15	251.07	534.547	.377	.912
d16	251.43	537.289	.244	.913
d17	251.90	528.162	.360	.912
dt1_1	250.93	538.547	.318	.912
dt1_2	251.03	532.171	.557	.911
dt1_3	251.13	538.809	.287	.912
dt1_4	251.07	526.478	.516	.910
dt2_1	250.80	536.924	.261	.912
dt2_2	251.53	530.326	.561	.910
dt2_3	251.57	541.357	.226	.913
dt2_4	251.80	533.269	.307	.912
dt3_1	250.83	535.316	.435	.911
dt3_2	250.83	538.695	.236	.913
dt3_3	251.03	530.378	.449	.911
dt3_4	251.30	528.355	.486	.911
dt3_5	250.77	541.633	.175	.913
dt3_6	251.77	518.944	.508	.910
dt3_7	251.33	524.644	.510	.910
dt3_8	251.80	524.993	.403	.911



	<b>Scale Mean if Item Deleted</b>	<b>Scale Variance if Item Deleted</b>	<b>Corrected Item-Total Correlation</b>	<b>Cronbach's Alpha if Item Deleted</b>
dt4_1	251.30	538.493	.395	.912
dt4_2	251.23	533.840	.419	.911
dt4_3	251.50	534.466	.401	.911
dt4_4	251.27	536.685	.468	.911
dt4_5	251.37	529.206	.579	.910
dt4_6	251.00	529.655	.566	.910
dt4_7	251.13	532.878	.434	.911
dt4_8	251.60	523.352	.555	.910
dt4_9	251.77	537.633	.278	.912
dt4_10	251.63	528.171	.469	.911
dt4_11	251.77	534.737	.373	.912
dt4_12	251.27	534.547	.353	.912
dt4_13	251.00	537.862	.345	.912
dt7_6	251.17	539.109	.320	.912
dt5_1	251.27	530.409	.514	.911
dt5_2	251.20	532.648	.387	.911
dt5_3	251.00	534.207	.402	.911
dt5_4	251.53	531.982	.369	.912
dt5_5	251.93	527.099	.375	.912
dt6_1	251.57	537.633	.266	.912
dt6_2	251.07	536.202	.261	.912
dt6_3	251.83	548.420	-.011	.916
dt6_4	251.13	541.637	.133	.914
dt6_5	251.77	531.840	.388	.911
dt7_1	251.33	533.609	.326	.912
dt7_2	251.77	521.633	.448	.911
dt7_3	251.20	528.648	.574	.910
dt7_4	251.33	541.747	.190	.913

	<b>Scale Mean if Item Deleted</b>	<b>Scale Variance if Item Deleted</b>	<b>Corrected Item-Total Correlation</b>	<b>Cronbach's Alpha if Item Deleted</b>
dt7_5	251.03	550.999	-.072	.914
dt8_1	250.80	546.510	.052	.914
dt8_2	250.73	543.651	.137	.913
dt8_3	251.37	528.585	.503	.911
dt8_4	251.47	537.430	.295	.912
dt9_1	251.40	541.214	.220	.913
dt9_2	251.53	536.464	.326	.912
dt9_3	251.57	537.771	.294	.912
dt9_4	251.73	541.375	.201	.913
dt9_5	250.83	548.282	.008	.914
dt9_6	251.63	517.206	.654	.909

**APPENDIX D**

**FOCUS GROUP INTERVIEW FORM**

**“Conceptualizing Digital Citizenship for Digital Natives in Thailand”**

Round No.: ..... Place: .....

Date: ..... Time: .....

**Moderator**

1. ....

**Assistant**

1. ....

2. ....

**Participants**

No.	Name	Sex	Age	Contact Info. (Tel/Email/FB/Line)
1.				
2.				
3.				
4.				
5.				
6.				

## APPENDIX E

### FOCUS GROUP INTERVIEW SEATING PLAN

#### “Conceptualizing Digital Citizenship for Digital Natives in Thailand”

Round No.: .....

Place: .....

Date: .....

Time: .....

<b>1. (A)</b> Name..... Nick Name .....	<b>Moderator</b>	<b>4. (F)</b> Name..... Nick Name .....
<b>2. (B)</b> Name..... Nick Name .....		<b>5. (E)</b> Name..... Nick Name .....
<b>3. (C)</b> Name..... Nick Name .....	<b>Research Assistant</b>	<b>6. (D)</b> Name..... Nick Name .....

## **APPENDIX F**

### **FOCUS GROUP INTERVIEW QUESTIONS**

- 1) What is the situation of Digital Natives and Digital Citizenship in Thailand?
- 2) What is the appropriate concept of Digital Citizenship for Thai Digital Natives?
- 3) What are the suggestions towards the following Digital Citizenship attributes that are needed and necessary for Thai Digital Natives?
  - (1) Digital Access
  - (2) Digital Commerce
  - (3) Digital Communication
  - (4) Digital Literacy
  - (5) Digital Etiquette
  - (6) Digital Laws & Ethics
  - (7) Digital Rights & Responsibilities
  - (8) Digital Health & Wellness
  - (9) Digital Security [Self-Protection]

## **BIOGRAPHY**

<b>NAME</b>	Chawaporn Dhamanitayakul
<b>ACADEMIC BACKGROUND</b>	Bachelor of Arts (English Linguistics), Thammasat University, Bangkok, Thailand in 2001 and Master of Arts (Mass Communication), Chulalongkorn University, Bangkok, Thailand in 2008
<b>PRESENT POSITION</b>	Lecturer, Department of Innovative Advertising and Creative Media, College of Communication Arts, Rangsit University, Pathum Thani, Thailand
<b>EXPERIENCES</b>	May 2003-June 2006 Brand Coordinator Zagro (Thailand) Limited December 2001-April 2003 Secretary to Animal Health Department F.E. Zuellig (Thailand) Co., Ltd. May 1998-March 2001 Junior Secretary, Italian Trade Commission (ICE, Government Agency) September 1996-July 1997 AFS student to Italy