



THE DEVELOPMENT OF KEY INDICATORS FOR MEASURING DIGITAL LITERACY SKILLS AND COMPETENCES IN THAI-CONTEXT CULTURE

การพัฒนาตัวบ่งชี้เพื่อการวัดทักษะและความเข้าใจและการใช้เทคโนโลยีดิจิทัลในวัฒนธรรมและบริบทไทย

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ABSTRACT

Digital literacy is a heart of people's daily and working lives. However, the deficit in digital literacy has been found across borders including Thailand. This study targeted to develop key indicators for measuring digital literacy skills and competences in Thai-context culture. Documentary research, altogether with anecdotal experiences, were used for data collection and analysis. The findings revealed five pillars of 1) digital access and proficiency, 2) digital communication and collaboration, 3) digital identity security, protection, and wellness, 4) digital assessment and evaluation, and 5) digital creativity and innovation. Specifically, the first pillar referred to the skills and knowledge to use and access technological devices and applications. The second pillar was about the skills and knowledge to use technological devices and applications to communicate and collaborate with stakeholders. The third pillar was managed about the skills and knowledge to use technological devices and applications deliberately, responsibly, and legally. The fourth pillar focused on the skills and knowledge to use technological devices and applications reasonably, critically, and flexibly. The last pillar highlighted the skills and knowledge to use technological devices and applications for further development and contribution. Although these digital literacy key indicators have to be validated and this study is playing a role of a pilot study, this study should be a kick-off platform to test employees' digital literacy beforehand. Furthermore, and continual research and development should be conducted and implemented.

Keywords : Digital Literacy ; Key Indicators ; Thai-Context Culture ; Skills ; Competences

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บทคัดย่อ

ความเข้าใจและการใช้เทคโนโลยีดิจิทัล (Digital Literacy) ถือเป็นหัวใจสำคัญของชีวิตประจำวัน และชีวิตการทำงานของผู้คน อย่างไรก็ตาม ยังพบความขาดแคลนในการรู้เท่าทันดิจิทัลอยู่ทั่วไป รวมถึงประเทศไทยด้วย การวิจัยครั้งนี้ใช้การวิจัยเอกสาร โดยประสบการณ์ของผู้วิจัยร่วมด้วยในการเก็บรวบรวมข้อมูล และการวิเคราะห์ข้อมูล ผลการวิจัยพบว่าการวัดทักษะและความสามารถในการรู้เท่าทันดิจิทัลมีทั้งหมด 5 หลักการ ได้แก่ 1) การเข้าถึง และความชำนาญด้านดิจิทัล 2) การสื่อสารและการร่วมมือกันด้านดิจิทัล 3) ความปลอดภัย การคุ้มครอง และความสมบูรณ์ด้านดิจิทัล 4) การประเมินผลด้านดิจิทัล และ 5) การสร้างสรรค์ และนวัตกรรมด้านดิจิทัล โดยเฉพาะเจาะจง หลักการที่ 1 ว่าด้วยเรื่องของทักษะและความรู้ในการใช้และการเข้าถึงเครื่องมือและแอปพลิเคชันเทคโนโลยีต่างๆ หลักการที่ 2 ว่าด้วยเรื่องของทักษะและความรู้ในการใช้เครื่องมือและแอปพลิเคชันเทคโนโลยีต่างๆเพื่อสื่อสารและสร้างความร่วมมือกับผู้มีส่วนได้ส่วนเสีย หลักการที่ 3 ว่าด้วยเรื่องของทักษะและความรู้ในการใช้เครื่องมือและแอปพลิเคชันเทคโนโลยีต่างๆอย่างรอบคอบ รับผิดชอบ และถูกต้องตามหลักกฎหมาย และข้อบังคับต่างๆ หลักการที่ 4 ว่าด้วยเรื่องของทักษะและความรู้ในการใช้เครื่องมือและแอปพลิเคชันอย่างสมเหตุสมผล ผ่านระบบการวิเคราะห์ และเป็นไปด้วยความยืดหยุ่น หลักการที่ 5 ว่าด้วยเรื่องของทักษะและความรู้ในการใช้เครื่องมือและแอปพลิเคชันสำหรับการพัฒนา และการสร้างประโยชน์ในอนาคต แม้ว่าตัวบ่งชี้การรู้เท่าทันดิจิทัลที่พัฒนาขึ้นนี้จะต้องได้รับการตรวจสอบความเที่ยงตรง และในขณะเดียวกันงานวิจัยชิ้นนี้ถือเป็นงานวิจัยนำร่อง แต่ก็ถือว่างานวิจัยนี้เป็นจุดเริ่มต้นสำคัญในการพัฒนาการรู้เท่าทันดิจิทัลของพนักงานในองค์กร ควรจะต้องมีการพัฒนาการวิจัยอย่างต่อเนื่องในอนาคต

คำสำคัญ : ความเข้าใจและการใช้เทคโนโลยีดิจิทัล ; ตัวบ่งชี้ ; วัฒนธรรมและบริบทไทย ; ทักษะ ; ความสามารถ

INTRODUCTION

I shall start my paper with a sexy quote from Goldman (2017) giving us inspiration and initiative in developing this research project, and saying that:

‘It’s not that employees are getting less tech-savvy; it’s that the market demands more of each and every one of them. The word “digital” used to mean your company’s investments in IT, and perhaps social media readiness, but now it’s bigger, touching on your company’s overall culture. ... However, simply investing in tools isn’t a substitute for strong

leadership. For any company to future-proof itself, its executive team needs to believe in and commit to raising its workforce’s digital IQ’ (Goldman, 2017).

The importance of digital literacy is widely accepted nowadays (e.g., Clark, 2018; Hewitt, 2013; Ibrahim et al., 2013; Intaravichai, 2018). Following to the statement of Goldman (2017), digital literacy is a professional skill and tacit and explicit knowledge required by all types of enterprises and from the top to the lower. Otherwise, loss of competitive advantage can be the expected result. Interestingly, Rickards and Grossman (2017) categorised four types of leader in the digital era, i.e. digital thinker, digital disruptor, digital leader,

and digital transformer. Respectively, its differences range from just digital understanding or so-called digital immigrants to digital experiencing and insights or so-called digital natives (Rickards & Grossman, 2017).

Agreed by not only Goldman (2017) as mentioned above, but also Vitolina (2015) and Vanderbilt University (n.d.), recently, digital literacy goes far beyond skills, knowledge, and, let's say, self-efficacy. That is to say, these factors are the main elements of the digital competency orbit. According to Vanderbilt University (n.d.), once again, measures of digital literacy should include the skills to process information, to communicate critically, and to respect to each other.

Digital literacies, moreover, are differently considered, following to cultural diversity (Traxler, 2018), demographics (Pangrazio, 2016; Srinuan & Bohlin, 2013), socio-economic status (Pangrazio, 2016; Srinuan & Bohlin, 2013), and the country's basic equipment (Srinuan & Bohlin, 2013).

Especially for cultural diversity factors in Thailand, in particular, it is widely known and accepted throughout the society that Thai people are always embedded with the mindsets of being chill and easy, being not a big deal, being respectful, not making someone lose his face, respecting to someone who have older age and higher state and position, and giving honour to others (Niratpattanasai, 2014). Especially for the last four mindsets, it is strengthened in the finding of Vajiraporn (2014) that, in a meeting, although people are provoked with very good perspectives, they must keep them quiet. Otherwise, it seems that they do not respect other people and are the

ones who make the trouble and difficulties to a company.

By using the Hofstede's cultural dimension, the findings of Chaisilwattana & Punnakitikashem (2017) confirm Thai culture, particularly in workplace as follows: due to human being as social animal, building and maintaining rapport with colleagues must be considered; appraisal especially from bosses is highly appreciated; and respecting to individuals whose age and status and position are higher. However, this current study provides an opposite result to the one presented by Niratpattanasai (2014) and Vajiraporn (2014) in term of not saving someone's face when a solution has to be figured out.

Therefore, this study targeted to develop key indicators for measuring digital literacy skills and competences, specifically in Thailand. Therefore, this study targeted to develop key indicators for measuring digital literacy skills and competences, specifically in Thailand.

OBJECTIVES OF THE STUDY

Once again, this research aimed to figure out measures of digital literacy for those who were Thai citizens.

METHODOLOGY AND MATERIALS

Documentary research, along with my anecdotal experiences was employed in this study. I had analysed and developed the digital literacy key indicators from the following list of articles (alphabetical order). These eight articles were specifically selected and included because they

predominantly focused on criteria and measures of evaluating digital literacy.

- Choi, M., Glassman, M., & Cristol, D. (2017). What it means to be a citizen in the internet age: Development of a reliable and valid digital citizenship scale. *Computers & Education*, 107,100-112.doi:

<http://dx.doi.org/10.1016/j.compedu.2017.01.002>

Brief conclusion: The study targeted to evaluate the reliability and validity of the Digital Citizenship Scale (CDS), i.e. whether or not people are able to, whether or not they thought and believe, and in extent to which they are able to join online-based activity whose levels are ranged from being easy and simple to being difficult. The findings of the study revealed that the CDS could be accepted. Also, three levels of complexity were shown. These were “Necessary but not Sufficient Condition” (p.111), including general technical skills to access digital platforms; “Distributed and Communicative Condition” (p.111), including ethical considerations at national and international levels; and “Collaborative and Cooperative Condition” (p.111) including digital networking and collaboration, actual digital participation, and digital creativity and innovation.

- Colbert, A., Yee, N., & George, G. (2016). From the editors: The digital workplace and the workplace of the future. *Academy of Management Journal*, 59(3), 731-739.doi:

<http://dx.doi.org/10.5465/amj.2016.4003>

Brief conclusion: The authors of this academic article addressed many skills and competences, ranging from basic to complicate one that should be highlighted in the digital workplace. Mainly, these are 1) understanding and ability to use some

fundamental devices and technologies; 2) leadership and team management skill; 3) mistake learning skill; and 4) interpersonal communication and collaboration.

- Department of eLearning. (2015). Digital literacy: 21st century competences for our age. Retrieved October 16, 2018, from

<https://education.gov.mt/en/elearning/Documents/Green%20Paper%20Digital%20Literacy%20v6.pdf>

Brief conclusion: In this document, digital competence, especially among students is explained and elaborated in five dimensions, i.e. 1) students are able to use, manage, analyse, and judge ICTs, technologies, and applications; 2) students are able to create communication and collaboration with others; 3) students are able to create content and information through technologies and applications and concern about ethical issue; 4) students are able to know and protect themselves from digital harm and risk; and 5) students are able to handle some problems, make decisions, and create and develop something new and innovative.

- Isman, A. & Canan Gungoren, O.C. (2015). Digital citizenship. *The Turkish Online Journal of Educational Technology*, 13(1), 73-77.

Brief conclusion: The objective of this study was to evaluate the validity and reliability of the Digital Citizenship Scale from creating the items from reviewing the literature of Ribble & Bailey (2007). According to Ribble & Bailey (2007), there are three main pillars and nine sub-items, i.e. 1) “Student Learning & Academic Performance” (p.74) (including the ability to know, make use of, and create communication through ICTs and technologies); 2) “Student Environment & Student

Behavior” (p.74) (including the ability to protect themselves from digital harm and risk, know about ethical consideration, and respect to other people in the digital world); and 3) “Student Life Outside the School Environment” (p.74) (including the ability to understand cyber law, stay lived in the digital world, and rules and regulations for buying and selling products and/or services online.

- Phuapan, P., Viriyavejakul, C., & Pimdee, P. (2016). An analysis of digital literacy skills among Thai university seniors. *International Journal of Emerging Technologies in Learning*, 11(03). doi: <http://dx.doi.org/10.3991/ijet.v11i03.5301>

Brief conclusion: The paper highlighted the importance of understanding digital literacy skills and competences in the educational and professional worlds. By applying the Bloom’s taxonomy including remembering, understanding, applying, evaluating, and creating, to create and build digital citizenship, the finding revealed that the ability of people to make decision on how to use data and information should most be encouraged.

- Royle, J. & Laing, A. (2014). The digital marketing skills gap: Developing a digital marketer model for the communication industries. *International Journal of Information Management*, 34, 65-73. doi:

<http://dx.doi.org/10.1016/j.ijinfomgt.2013.11.008>

Brief conclusion: Since marketing communication professionals are lacking technical skills, the researchers have proposed the Digital Marketer Model as the key indicators to develop the skills and competences of marketing communication professionals. Ranging from technical skills to business management skills, there are 1) the ability

to know, understand, and use digital marketing communication tools, techniques, applications, and platforms; 2) the ability to evaluate for further development; 3) the ability to apply and link digital marketing communication knowledge and practices; 4) the ability to know and apply how external factors including political, economic, legislative, social, cultural, and ethical conditions impact strategic approaches of designing digital marketing communications; 5) the ability to use digital technologies for communication; 6) the ability to utilise digital technologies to create collaboration and engagement with consumers; and 7) the ability to use digital devices and technologies for further project / campaign development.

- Thanachart. (2016). What are digital skills Thais should have to step into Thailand 4.0. Retrieved October 16, 2018, from

<https://thanachart.org/2016/11/06/digital-skill-%E0%B8%97%E0%B8%B5%E0%B9%88%E0%B8%84%E0%B8%99%E0%B9%84%E0%B8%97%E0%B8%A2%E0%B8%84%E0%B8%A7%E0%B8%A3%E0%B8%A1%E0%B8%B5%E0%B8%96%E0%B9%89%E0%B8%B2%E0%B8%88%E0%B8%B0%E0%B8%95%E0%B9%89/>

Brief conclusion: This article proposes the digital skills metro map from Ireland and recommends companies and brands in Thailand to embed their employees with these six skills including “Tools & Technologies”, “Find & Use”, “Teach & Learn”, “Communication & Collaborate”, “Create & Innovate”, and “Identity & Wellbeing”.

- Van Laar, E., van Deursen, A.J.A.M., van Dijk, J.A.G.M., & de Haan, J. (2017). The relation between 21st-century skills and digital skills: A



systematic literature review. *Computers in Human Bahvior*.577-588.doi:

<http://dx.doi.org/10.1016/j.chb.2017.03.010>

Brief conclusion: The researchers conducted a systematic literature review and come up with digital literacy skills and competences that are vital for employees and students in the digital world. Generally speaking, these include knowledge and the ability to use digital tools, technologies, and applications for general technical uses, evaluation and management, communication and networking, innovation development, decision making, adaptability, and so forth.

RESULTS

From the articles studied and my anecdotal experiences, there were five pillars for assessing employees' digital literacy competencies. Table 1 exhibited an overview picture of such five pillars and explanations.

Table 1 Five pillars for assessing employees' digital literacy skills and competencies

Pillar	Explanations
Pillar I: Digital access and proficiency	The skills and knowledge to use and access technological devices and applications
Pillar II: Digital communication and collaboration	The skills and knowledge to use technological devices and applications to communicate and collaborate with stakeholders
Pillar IV: Digital	The skills and knowledge to

assessment and evaluation	use technological devices and applications reasonably, critically, and flexibly
Pillar V: Digital creativity and innovation	The skills and knowledge to use technological devices and applications for further development and contribution

The illustrations of a particular pillar were displayed as below:

Pillar I: Digital access and proficiency

Digital access and proficiency included the skills and knowledge to use and access ICT devices and applications. It could be divided into six sub-themes as follows:

1. Digital devices and applications use was the skills and knowledge to use and access ICT devices and applications. The questions could be, for example, "I know and am able to use email marketing", "I know and am able to use social media (e.g., Facebook, Twitter, Instagram, etc.)", "I know and am able to use MS Office", "I know and can use Good Adwords", "I know and can use Google Analytics", "I know and am able to use testing and optimization", "I know and can design User Experience (UX) including the creation of wireframes, user testing and surveys, data analysis, and storyboard", "I know and can write a code and design websites or landing pages using HTML / CSS, Javascript, or other relevant programmes", "I know and can use Adobe Creative Suite", "I know and can use Microsoft Excel", "I know and am able to work on Google Docs", "I know and am able to conduct a meeting via webconferencing /

teleconferencing”, “I know and am able to work with other people by using collaboration tools”, “I know and am able to use instant messaging or microblogging”, “I know and can use of pay per click (PPC) to increase sales volumes”, “I know and can design webinars or virtual events”, “I know and can create paid search and online advertising”, and “I can access information / data sources online”.

2. Information researching was the skills and knowledge to use ICT devices and applications to search and find information / data sources. The respondents could be asked about “I know devices and applications that can suitably solve a problem” and “I know and can search information online to solve a problem specified”.

3. Information / Data Management was defined as the skills and knowledge to use ICT devices and applications to manage information / data retrieved from online. To evaluate the employees’ digital skills and competences, they should be asked about “I know and am able to store and manage information and data online”, “I know and am able to manage information and data gained online in order to use in the present and in the future”, “I know and can share implicit and explicit knowledge and information with others”.

4. Information Evaluation and Decision-Making covered the skills and knowledge to be able to evaluate and make a judgment on information / data retrieved from online. These included the questions like “I know and can evaluate and make decision on the credibility of information sources that I have gained online” and

“I know and can analyse data for, for example, customer insights”.

5. Digital Self-Efficacy and Anxiety made a thought of the skills and knowledge to use ICT devices and applications with confidence. These included the enquiries about “I am confident that I am able to use digital devices and applications” “I am confident that using digital devices and applications is not difficult as expected”, and “I am confident to overcome difficulties of digital devices and applications”.

6. Sensory and Emotional Engagement were meant to the skills and knowledge to emotionally get involved in. This was evaluated by “I am motivated by my employers to collaboratively work online”, “I am motivated by my employers to manage my work online”, “I am motivated by my employers to search information online”, “I am motivated by my employers to communicate and make relationship with my colleagues and other stakeholders online”, “I am motivated to share ideas and thoughts online”, “I am motivated to work from home”, “I am motivated by my employers for a sense of digital culture and workplace”.

Pillar II: Digital Communication and Collaboration

There were another six items to go beyond to assess the skills and knowledge to use ICT devices and applications to communicate and collaborate with stakeholders or digital communication and collaboration.

1. Management of Interpersona

Communication and Relationship was identified with the skills and knowledge to use ICT devices and applications to communicate and collaborate. A wide range of questions that should be enquired were “I can use digital devices and applications to communicate with my colleagues and stakeholders online”, “I can use digital devices and applications to work with my colleagues and other stakeholders online”, “I can use digital devices and applications for self-improvement and self-development”, “I enjoy talking and communicating with my colleagues and stakeholders online”, and “I am happy collaboratively working with my colleagues and other stakeholders online”.

2. Project Management was about the skills and knowledge to use ICT devices and applications to manage projects and tasks assigned. It would be nice if the employees were tested about “I can manage my project and task assigned via using digital devices and applications”.

3. Leadership was interesting to be included since it was important for brands to know their employees’ skills and knowledge to use ICT devices and applications to work with teams and achieve his own and the company’s vision and goals. This dimension looked at “I can use digital devices and applications to adapt my approach to fit well with my virtual team and the problem specified”, “I can use digital devices and applications to achieve my own vision and goals”, “I can use digital devices and applications to achieve the company’s vision and goal”, “I can use digital devices and applications for my work strategically”, and “I can use digital devices and

applications to manage and work with teams who have different skills”.

4. Digital Storytelling was managed about the skills and knowledge to use ICT devices and applications to tell a story and narrative. “I can plan and develop a storyboard and script outline to tell a story and narrative”, “I can tell a story and narrative clearly and completely”, “I know and can filter visuals, audios, and videos to tell a story and narrative effectively”, and “I know and be able to use a wide range of digital devices and applications (for instance, digital cameras, digital voice recorders, iMovie, Windows Movie Maker, and Final Cut Express) to tell a user-generated story and narrative” were the examples of questions.

5. Information / Data Presentation, as it was, was the skills and knowledge to present information / data effectively through digital devices and applications. The question was something about “I can use digital devices and applications for information / data presentation effectively”.

6. Channel Management and Planning were the skills and knowledge to plan and manage offline and online channels of communication by considering target audience and cost-effectiveness. Unsurprisingly, “I know and can plan a wide range of communication channels to match a customer journey” and “I can plan and manage communication platforms with cost-effectiveness” should be asked.

Pillar III: Digital Identity Security, Protection, and Wellness

The Internet was so-called a two-edged sword innovation. While it helped the betterment

in people's daily lives and works, their own privacy and security were later on addressed. This pillar covered the skills and knowledge to use ICT devices and applications deliberately, responsibly, and legally. The three sub-divisions were discovered under this item as follows.

1. Awareness was about to ask people themselves "I am personally aware of a cyberbullying crisis", "I am personally aware of online impacts on political, economic, and social factors", "I am personally aware of online unethical risks", "I am personally aware of culturally different perspectives expressed online", "I am personally aware of culturally different online laws and regulations", "I am personally aware of artificial identity online", and "I am personally aware of online self-protection".

2. Digital Rights and Responsibilities were about the knowledgeable skills that people were legally protected. This included two specific examples of "I know that I am protected by right and privacy law" and "I know that I am responsible for anything I have done online".

3. Digital Commerce talked about "I know and can specify customer experience", "I can use a wide range of marketing communication channels", "I understand and can use data-driven marketing", "I know and can do mobile marketing", "I know and can do social marketing", and "I understand emerging marketing technology and trends".

Pillar IV: Digital Assessment and Evaluation

Digital assessment and evaluation focused on the skills and knowledge to use ICT devices and

applications reasonably, critically, and flexibly. This item could be divided into three sub-domains.

1. Critical Thinking should measure about "I think the information / data available in digital devices and applications can help me criticise what is ethical, correct, and fair", "I think the use of digital devices and applications can help me answer and find a solution", "I think the use of digital devices and applications gives me the opportunity to improve and develop myself", "I think the use of digital devices and applications motivate me to engage a variety of the company's activities", and "I think the use of digital devices and applications help change my working way and belief".

2. Flexibility was essential to evaluate such as "I think the use of digital devices and applications can adapt my thought and behaviour to fit with the ever-changing digital world".

3. Digital Problem Solving emphasised on the skills and knowledge to use ICT devices and applications to identify a wide range of problems and give a wide range of solutions. In this case, it covered "I know and can use digital devices and applications to identify a technical problem", "I know and can use digital devices and applications to solve a technical problems", "I know and can use digital devices and applications to identify stakeholders' needs and wants", "I know and can use digital devices and applications to match stakeholders' needs and wants", "I know and can use digital devices and applications to provide possible solutions", and "I know and can use digital devices and applications to identify skills and competencies gaps and improvement".



Pillar V: Digital Creativity and Innovation

Last but not least, digital creativity and innovation were about to test the skills and knowledge to use ICT devices and applications for further development and contribution. This could be divided into two sub-domains, i.e. content-generated creation and innovation creation.

1. Content-Generated Creation was happy with the statements, for example, “I can create important, quality, and beneficial content and share it on social media” and “I can modify and improve existing content and share it on social media”.

2. Innovation creation was developed to bridge the gaps on many reasons such as, “I can create and optimise a website”, “I can create and develop cloud-based software”, “I can create and develop enterprise mobile”, “I can create and develop engineering devices”, and “I can create and develop a programme that help improve quality and quantity in products and / or services”.

DISCUSSION AND SUGGESTIONS

This study was to develop key indicators for measuring digital literacy skills and competences in Thai-context culture. The results went beyond my expectation when measuring digital literacy skills and competences. The digital literacy skills and competences were not only limited in a border of physical technological and applications use and knowledge. In contrast, it touched something that was emotional, sensible, and intangible. What I meant by this included the four pillars of digital communication and

collaboration; digital identity security, protection, and wellness; digital assessment and evaluation; and digital creativity and innovation. Even being in an academic world, I shall draw my discussion by mapping with the Bloom’s taxonomy (in Levy, 2018) as shown below.

Table 2 The discussive comparion between the Bloom’s taxonomy (in Levi, 2018) and that developed in this study

Bloom’s taxonomy (in Levy model, 2018)	The study’s model
Create	Digital creativity and innovation
Evaluate	Digital assessment and evaluation
Analyse	Digital identity, security, protection, and wellness
Apply	Digital communication and collaboration
Understand	Digital access and proficiency
Remember	

What I have experientially learned from these measures in digital literacy skills and competences are a process. Comparing with the Levy’s model of digital literacy skills (2018), it is a basic need that individuals are needed to practise and comprehend various technological devices, tools, and applications that are important for their daily and working lives. So, they should be able to apply their skills and knowledge in any circumstances, both expected and unexpected. Since they got closer with technological devices,

tools, and applications, they should be able to manage and consider some linkages and/or gaps that they must consider. In this case, it was about ethical consideration and responsibility. Next, people are managed to compare and make a decision on what they should do so that the last step of digital creativity and innovation should be exploded.

As communication academic and professional persons, I could not really forget a concept of a marketing funnel. As for persuading people to have action and/or purchase, it was important to start from, awareness, interest, consideration, preference, and purchase.² This could be applied in the lights of understanding measure in people's digital literacy skills and competences and also of finding out a strategic communication way to make people convinced. The study of Sasisuwan, Chairat, Khamujing, & Pakamaetavee (2017) revealed that information seeking and consideration are the most two influencing factors on consumers' decision making on purchasing products through e-commerce, respectively. That highlighted the importances of digital access and proficiency, digital communication and collaboration, digital identity, security, protection, and wellness, and digital assessment and evaluation levels of consumers. This could, furthermore, strengthen the educational world when teachers must be able to understand, apply, analyse, evaluate, and create ICTs and technological devices and applications for

designing teaching and learning materials that can reach their ever-changing students (Nunart, 2017).

The contribution of this study is to use it, as a vital platform of evaluating digital literacy skills and competences of, especially people working in profit and/or nonprofit companies. With the explanations, this research could, likewise, shed light on an approach of communicating to increase people's ability and comprehension in digital literacy.

I would suggest researchers and professionals to conduct a qualitative study for this measure's confidence and improvement, especially in wording, arrangement, jargon, and so forth. Future study also, certainly, should pay attention to validate these key indicators since this research provides a pilot study only.

CONCLUSION

Measure in digital literacy is vital and need to be considered in order to provide the betterment, move, and growth from individual, company, society, a country, and the world. The study would like to achieve the goal of providing a platform of how to measure digital literacy skills and competences of individuals living in Thailand. Following to the documentary research and anecdotal experiences, there are five touch points that should be considered including 1) digital access and proficiency – the skills and knowledge to use and access technological devices and applications; 2) digital communication and collaboration – the skills and knowledge to use technological devices and applications to communicate and collaborate with stakeholders;

² This could be varied, following to a model to other models.



3) digital identity, security, protection, and wellness – the skills and knowledge to use technological devices and applications deliberately, responsibly, and legally; 4) digital assessment and evaluation – the skills and knowledge to use technological devices and applications reasonably, critically, and flexibly; and 5) digital creativity and innovation – the skills and knowledge to use technological devices and applications for further development and contribution. Those who are equipped with digital literacy are an important, valuable source of Thailand and the whole society.

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