Development of a Recognizing Digital Skills Model to Promote Community Business Learning and Creative Tourism in the Mekong Riverside Area, Nakhon Phanom Municipality, Thailand

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Abstract

Digital literacy and skills development have become essential for life and work in the 21st century. UNESCO's Learning City concept emphasizes creating environments conducive to lifelong learning for all in a community, this study recognizes the importance of digital skills development as a key future skill that needs to be promoted immediately and continuously to enhance the competitiveness and sustainable development of communities in the digital age. The objectives are as follows: 1) Development of a recognizing digital skills Model, 2) evaluate the appropriateness of the developed model, and 3) Investigate the outcomes of recognizing digital skills Model for community business entrepreneurs and creative tourism in the Muang Nakhon Phanom area along the Mekong River. The research methodology consisted of 3 phases: 1) model synthesis through document analysis, 2) model appropriateness assessment by 9 experts, and 3) model application to develop digital skills. The target group consisted of 258 small entrepreneurs from 8 communities in the Mekong River Area, Nakhon Phanom Municipality, selected by purposive sampling. The research instruments were a document synthesis form, a model appropriateness form, and a digital skills assessment form. Data were analyzed using mean and standard deviation. The results found that the digital skills perception model consisted of 4 components: 1) environmental inputs 2) sensory inputs, 3) specialized experience for interpretation, and 4) construing sensory information. Experts assessed the developed model as highly appropriate, and the post-learning digital skills assessment found that 80.58% of the participants scored from basic to advanced levels.

Keywords: Recognizing Digital Skills, Community Business Learning, Creative Tourism, Mekong Riverside Area, Educational Model Development

Introduction

Digital skills entail an understanding of digital technology that fosters lifelong learning, including the creation of a learning society with information technology. They are essential skills in the 21st century, pivotal to knowledge creation. Digital skills involve the application, design, and creation utilizing the capabilities of information technology to manage data through developed software programs. (Pratolo & Solikhati, 2021). Digital skills encompass explaining access, interpretation, and the design of various forms of content via the Internet. This includes the ability to communicate, utilize data to collaborate, and foster creativity through digital technology (Pegrum et al., 2018). Digital literacy is not just about processing and using information; it's about a person's ability to read and understand content, as well as write or create new knowledge. Digital expertise is divided into three levels: Level 1 refers to knowing the skills, concepts, approaches, and attitudes; Level 2 refers to using professional applications; and Level 3 refers to the ability to transform digital space, develop, and create new things. This can be termed innovation, which can arise from creative individuals. The learning process and the development of digital skills for effective communication with the current target group are crucial. This includes utilizing digital skills to enhance the livelihood of community businesses and reach the target audience through digital platforms, thereby maximizing their benefits. Community business is a concept that emphasizes enabling community members to actively participate in laying the foundation for local economic development. This is achieved through collective participation in groups to create employment opportunities and generate additional income. Beyond its impact on economic development, community businesses also foster the growth of resilient communities by promoting cooperation and shared ownership. By pooling resources and leveraging communal wisdom, these enterprises create added value, thereby enhancing the local economy and laying the groundwork for improved quality of life and well-being at both the familial and community levels. The success, progress, stability, and sustainability of both the business and the community hinge on the strength of this foundation. (Nithichaianan & Chidchob, 2022).

The development of creative tourism is greatly influenced by its alignment with the unique context of a given area, which is crucial for fostering sustainable growth. To achieve this, it is imperative to adhere to correct and appropriate guidelines. This involves a comprehensive analysis of both the internal and external environments related to tourism within communities, highlighting both positive and negative aspects. Internally, attention should be given to identifying strengths (Strengths) and weaknesses (Weaknesses) of the community across various dimensions. These include Structure and policy (S1): Organizational structure, work systems, and internal controls. Service and products (S2): Offerings such as services, business programs, tourism activities, and facilities. Personnel (M1): Management of personnel, including coordination officers, operators, tour guides, and staff. Money (M2): Financial and accounting aspects. Materials and equipment (M3): Resources such as office supplies, technology, and equipment. Externally, it is important to assess opportunities (Opportunities) and threats (Threats), which encompass Customers or service recipients (Customer: C), referring to tourists. Political factors (Political: P), including laws and government policies. Economic and environmental conditions (Economic and Environment: E), such as the economy and supporting agencies, as well as commercial competitors, business partners, and alliances. Social conditions (Social: S), encompassing social situations encountered. Technological factors (Technological: T), focusing on systematic technology.

This comprehensive analysis serves as a guideline for creating creative tourism formats that are in harmony with the area's context, facilitating correct and sustainable development. In summary, this approach yields a creative tourism model comprising four key components: 1) creative communities, 2) creative tourist attractions, 3) creative entrepreneurs, and 4) creative tourists (Juliratchaneekron et al., 2022).

Recognition style, which refers to an individual's distinctive pattern of perceiving, processing, and retaining information, plays a significant role in determining how learners interact with and adapt to new knowledge. According to Luo et al. (2023), recognition style can be categorized into dimensions such as holistic or analytical perception, continuous or discontinuous processing, and visual or verbal memory. These unique cognitive patterns influence the efficiency of learning and problem-solving processes. Tailoring educational interventions to align with recognition styles can stimulate cognitive development, leading to better learning outcomes and more effective problem-solving.

In the context of community businesses and creative tourism in Nakhon Phanom, recognition style can guide the design of learning tools that accommodate diverse cognitive preferences among local learners. Yamamoto et al. (2023) emphasize that recognizing individual differences in sensory modalities such as visual, auditory, or kinesthetic preferences can significantly enhance learning efficiency, particularly in digital environments. This highlights the importance of a personalized approach to skill development to meet the diverse needs of learners in a community setting.

The Mekong Riverside region, with its rich cultural heritage and natural resources, offers a unique opportunity to integrate local knowledge and digital skills into community business development. By fostering recognition skills tailored to the local context, this research aims to develop a Recognizing Digital Skills Model that aligns with the recognition styles of community members. This model will support effective learning, enhance creativity, and promote sustainable development in community businesses and creative tourism.

Given the aforementioned reasons, the researcher aims to develop a learning model aligned with the context and approach necessary for promotion. As such, there is a need to investigate concrete guidelines for fostering digital skills to enhance understanding of community businesses, including creative tourism, particularly in the Nakhon Phanom city area. This region has a policy aimed at advancing community tourism to uplift the grassroots economy. Therefore, the goal is to develop a model for recognizing digital skills that can facilitate learning about community businesses and creative tourism in the Mekong River region of Nakhon Phanom Municipality. The intention is to create new knowledge that can harness the potential of citizens towards a digital society. This involves devising a digital skills recognition model with clear components, steps, and application guidelines. These guidelines will not only benefit other areas or contexts but also ensure efficiency in implementation.

Research Objectives

1. Develop a model for recognizing digital skills to facilitate learning about community businesses and creative tourism in the Nakhon Phanom Municipality area along the Mekong River.
2. Evaluate the suitability and effectiveness of the digital skills recognition model in promoting learning about community businesses and creative tourism in the Nakhon Phanom Municipality area along the Mekong River.

3. Investigate the outcomes of digital skill development for community business entrepreneurs and creative tourism in the Muang Nakhon Phanom area along the Mekong River.

Literature Review

Recognition Style

Recognition style in the learning context refers to an individual's unique pattern of perceiving, processing, and retaining new information, which influences learning efficiency and problem-solving abilities. This pattern can be categorized into several dimensions, such as holistic or analytical perception, continuous or discontinuous processing, and visual or verbal memory (Luo et al., 2023). It encompasses the distinctive characteristics of each individual in information perception and processing, including preferences or aptitudes for receiving information through various sensory modalities. These preferences affect cognitive patterns and methods of managing new information, all of which impact learning efficiency and problem-solving capabilities (Yamamoto et al., 2023). In essence, individual recognition styles differ in processing information from various sensory inputs. This process can be enhanced by stimulating cognitive processes tailored to each individual's style, thereby promoting the efficiency of new learning acquisition.

Digital Skills

Digital skills refer to a set of abilities in using digital devices, applications, communication tools, and networks to access, manage, evaluate, create, and communicate information and knowledge. These skills are categorized into three levels:
1. Basic Skills: Fundamental digital technology usage skills, such as using computers, smartphones, and browsing the internet.
2. Intermediate Skills: Enhanced ability to use digital technologies efficiently, including the use of more complex software and applications.
3. Advanced Skills: Skills related to advanced technology use, such as programming, application development, and big data analysis.

It is emphasized that Digital skills are not limited to technical skills alone but also include abilities in critical thinking, problem-solving, communication, and collaboration in digital contexts. This encompasses understanding cybersecurity, digital ethics, and digital media literacy (UNESCO, 2018) In alignment with new and future lifestyles, Digital skills can be described as the ability to use digital technology efficiently and creatively. This includes computational thinking skills, problem-solving, analytical thinking, and creating innovations in digital contexts. These skills are not only related to technology use but also include the ability to evaluate, analyze, and synthesize digital information, as well as critically participate in digital environments (van Laar et al., 2017).

Community Business

Community business refers to an organizational model that integrates business operational concepts with community development, aiming to create a balance between commercial activities and the achievement of social objectives. It utilizes business management principles as a tool to drive social goals (Haugh, 2007). Notably, community businesses do not prioritize maximizing profits like conventional business organizations; instead, their primary

objective is to generate benefits for the community. A key characteristic of community businesses is the process of community participation, which plays a crucial role in both ownership and management. This feature distinguishes them from typical business organizations that often have ownership structures in the form of individuals or capital groups. This process results in local-level impacts, focusing on creating outcomes in both social and economic dimensions within the organization's operational area.

Furthermore, community businesses emphasize financial sustainability, requiring the community to be financially self-reliant through business activities. Hibbert, Shier, and (Teasdale, 2022) conclude that community business is a crucial mechanism for developing grassroots economies and enhancing community capacity. It harmoniously combines the concepts of social entrepreneurship with community development.

Creative Tourism

Creative tourism refers to a form of tourism where tourists and hosts jointly create value through meaningful shared experiences. This type of tourism provides tourists with opportunities to develop their creative potential through active participation, as defined by (UNESCO, 2013). The active involvement of tourists means they are not mere spectators but co-creators of their travel experiences. A notable feature of the Creative Tourism process could be described as tourism that provides opportunities for tourists to develop creative skills through participation in activities, experiential learning, or engagement in activities that are characteristic of that specific area (Wurzburger et al., 2009).

Material and Method

Research Methodology

This research follows a research and development model (R&D). The process involves collecting qualitative and quantitative research data and is divided into three steps: 1. Synthesizing the model, 2. Developing the model and assessing its appropriateness, and 3. Conducting a trial of the model

Target Sample

The target group includes entrepreneurs from 8 communities, totaling 258 people, selected through purposive sampling. The qualifications are defined as entrepreneurs who voluntarily participate in the project. These are shops in community business groups in 8 communities along the tourism route along the Mekong River in the Nakhon Phanom city area.

Research Instrumentations and Validation Assessment

1. Recordings and document analysis forms were employed for the recording and analyzing documents in relation to principles, theories, and relevant research studies.
2. The appropriateness assessment form for the model was developed by the researcher as a 5-level rating scale questionnaire consisting of 13 items. The Index of Item-Objective Congruence (IOC) was calculated at a level of 0.90.
3. The digital skills assessment form was developed by the researcher using a scoring rubric. The holistic scoring rubrics consider the quality level of performance in an overall manner, divided into 5 levels of achievable skills: Absent skills, Elementary

skills, Essential skills, Operational skills and Expert-level skills. The assessment consists of 20 items. The Index of Item-Objective Congruence (IOC) was calculated at a level of 0.88.

Data Collection

1. The synthesis of the recognizing digital skills Model to promote community business learning and creative tourism in the Mekong riverside area of Nakhon Phanom Municipality employed a data synthesis method through analytical description and interpretative summarization of data. This process focused on relevant theoretical principles, categorized into the following aspects: perception models, digital skills development, community business, and creative tourism. The study involved reviewing both domestic and international research, creating synthesis summary tables, and providing descriptive interpretations. The data collection period spanned from April to June 2023.
2. The assessment of the appropriateness of the recognizing digital skills Model for promoting community business learning and creative tourism in the Mekong riverside area of Nakhon Phanom Municipality was conducted through a data collection process. The researcher distributed the assessment materials via electronic mail, which included a letter requesting expert participation and the appropriateness assessment form. A total of nine experts responded and returned their evaluations via electronic mail. The data collection period for the assessment commenced in July 2023.
3. The digital skills assessment was conducted through data collection from a target group of 258 participants. The researcher carried out individual digital skills evaluations following the participants' engagement in four capacity development learning units. This process took place from September 2023 to February 2024. Participants were selected using purposive sampling. The digital skills assessment results were summarized in April 2024.

Data Analysis

1. The record form was categorized into the following aspects: perception models, digital skills development, community business, and creative tourism. Data were recorded in summary tables as frequency values. The analysis method employed descriptive interpretation and summary.
2. The assessment of the appropriateness of the recognizing digital skills Model for promoting community business learning and creative tourism in the Mekong riverside area of Nakhon Phanom Municipality, Utilized descriptive statistics for data analysis, including mean and standard deviation. Qualitative data analysis was conducted through interpretative summarization of the assessment form data and additional recommendations.
3. The digital skills assessment employed an analysis method that compiled individual scores and calculated the overall mean score. The passing criterion was set at 80% of the total score.

Research Summary

The research findings, summarized according to the research objectives, are as follows:

1. Results of the synthesis of the recognizing digital skills Model to promote community business learning and creative tourism in the Mekong riverside area of Nakhon Phanom Municipality. The data were synthesized based on key issues and summarized as illustrated in Table 1.

Table 1: Results of the Synthesis of the Recognizing Digital Skills Model to
Promote Community Business Learning and Creative Tourism in
the Mekong Riverside Area of Nakhon Phanom Municipality

Recognizing Components: Moven & Minor (1998), Chanpanpakdeewong (2016), Paoram (2017), Mukda (2018), Nuambang (2019), Rungruengthanapon & Pooldee (2018), Dechporn (2020)		Digital Skills Process: Jadtaniom (2022), Thongeiam (2021), Choeicharoen (2021), Chanayapol (2019)	Digital Skills Knowledge Activities of recognizing digital skills Model
Sensation	1) Environmental inputs	1) Review of prior knowledge	**Popular Platforms** Examples of digital footprint and sales, featuring popular community businesses and programs with high reach
	2) Sensory input	2) Identifying important elements	**Essential Digital Skills for Community Entrepreneurs** Popular and renowned entrepreneurs. The leaders share their experiences, categorized by business type. This reflects real success stories from entrepreneurs.
Interpretation	3) Specialized experience for interpretation	3) Recognition of Critical Elements	**Guidelines for Using Popular Platforms to Increase Accessibility** Digital Practice Expand accessible areas from regularly used programs, increase pinning, and create content linked from previously used programs. Add key elements for accessibility in digital spaces
	4) Construing sensory information	4) Content creation and data integration	**Summary of Essential Data for Digital System Input** Input digital data based on templates from each platform Utilize case studies from successful entrepreneurs linked through the same platform to increase interaction

The digital literacy perception model for promoting community business learning and creative tourism in the Mekong riverside area of Nakhon Phanom Municipality consists of 4 perception components: 1) environmental inputs 2) sensory inputs, 3) specialized experience for interpretation, and 4) construing sensory information.

The digital literacy perception model is presented in alignment with Experiential Learning Cycles theory (David Kolb), summarized as an overview of the digital literacy perception model as shown in Figure 1.
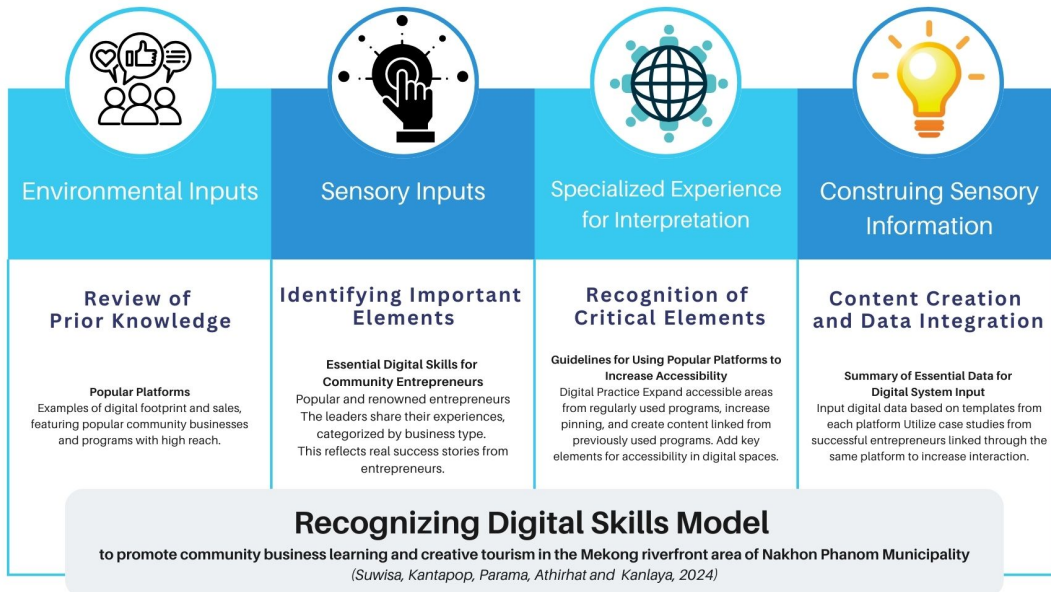
Figure 1: Recognizing Digital Skills Model to Promote Community Business Learning and Creative Tourism in the Mekong Riverfront Area of Nakhon Phanom Municipality

2. The results of the appropriateness evaluation of the Recognizing Digital Skills Model to promote community business learning and creative tourism in the Mekong riverside area of Nakhon Phanom Municipality, as assessed by 9 experts, found that the overall appropriateness was at a high level. The results are shown in Table 2.

Table 2: Results of the Appropriateness Evaluation of the Recognizing Digital Skills Model
to Promote Community Business Learning and Creative Tourism in
the Mekong Riverside Area of Nakhon Phanom Municipality

Evaluation Items for Components/ Processes of Digital Recognition	$\bar{x}$	S.D.	Results
1. Environmental inputs			
-Review of prior knowledge	4.44	0.68	High level
- Popular Platforms Examples of digital footprint and sales, featuring popular community businesses and programs with high reach	4.33	0.67	High level
Summary of Component 1	*4.39*	*0.68*	High level
2. Sensory input			
- Identifying important elements	4.78	0.78	Highest level
- **Essential Digital Skills for Community Entrepreneurs** Popular and renowned entrepreneurs who are group leaders share their experiences, categorized by business type. This reflects real success stories from entrepreneurs who have effectively utilized digital spaces for their businesses	4.67	0.67	Highest level
Summary of Component 2	**4.73**	**0.73**	Highest level
3. Employing specialized experiential learning in interpretation			
- Selective perception of critical elements	4.33	0.67	High level
- **Guidelines for Using Popular Platforms to Increase Accessibility** Digital Practice Expand accessible areas from regularly used programs, increase pinning, and create content linked from previously used programs. Add key elements for accessibility in digital spaces	4.67	0.47	Highest level
Summary of Component 3	**4.50**	**0.57**	Highest level
4. Construing sensory information			
-Content creation and data integration	**4.67**	**0.67**	Highest level
-**Summary of Essential Data for Digital System Input** Input digital data based on templates from each platform Utilize case studies from successful entrepreneurs linked through the same platform to increase interaction	**4.44**	**0.53**	High level
Summary of Component 4	**4.55**	**0.60**	Highest level
Total Average of All Components	**4.54**	**0.65**	Highest level

From Table 2, the results of the appropriateness evaluation of the Recognizing Digital Skills Model to promote community business learning and creative tourism in the Mekong riverside area of Nakhon Phanom Municipality show that the overall expert assessment was at the highest level ($\bar{x}$=4.54, S.D.=0.65). When considering individual components, it was found that Component 2, Sensory input, was rated by experts as the most appropriate.

3. The results of digital skills development for community business entrepreneurs and creative tourism in the Mekong riverside area of Nakhon Phanom City are shown in Table 3.

Table 3: The Number of People Evaluated After Participating in the Digital Skills Workshop for Community Business and Tourism, Totaling 258 Participants

Topic	Absent skills	Elementary skills	Essential skills	Operational skills	Expert-level skills
Capability to describe fundamental comprehension of the unique characteristics of the specified programs					
Facebook for community business	0	25	167	64	2
TikTok for advertising	0	89	149	20	0
Line for real-time customer communication	1	20	164	71	2
Instagram to increase customer reach	0	17	189	50	2
Capability to convey experiential knowledge exchange regarding the special features of programs					
Facebook Marketplace	8	41	171	34	4
Live video streaming through the TikTok application	9	65	170	14	0
Line Offial Chatbot	11	24	158	63	2
Instagram Media: Engaging audiences with visual content	10	25	190	33	0
Capability to integrate product information into sales-enhancing programs					
Google Map	0	4	210	40	4
Foodpanda	4	30	190	34	0
LineMan	6	24	187	41	0
Wongnai	39	80	110	29	0
Capability to establish digital data security for one's own business					
Facebook	9	50	168	23	8
Tiktok	5	31	179	43	0
Line	8	57	146	45	2
Instagram	27	60	128	43	0
Google Map	0	7	190	49	12
Foodpanda	13	59	154	32	0
LineMan	6	60	152	38	2
Wongnai	9	69	141	35	4
Percentage of total (N=256)	**3.19**	**16.22**	**64.21**	**15.52**	**0.85**
	19.42%		**80.58 %**		

From Table 3, it is found that out of 258 project participants who were evaluated, 64.21% demonstrated Essential skills, 15.52% showed Operational skills in practical use, and 0.85% exhibited Expert-level skills. In total, 80.58% of all project participants met or exceeded the set criteria of Essential skills and above. The remaining participants were categorized as having Elementary skills or Absent skills.

Discussion

The synthesis results of the recognizing digital skills model to promote community business learning and creative tourism in the mekong riverside area of nakhon phanom Municipality revealed that it consists of 4 components as follows: 1) environmental inputs 2) sensory inputs, 3) specialized experience for interpretation, and 4) construing sensory information. Xiong & Zhang (2024) conducted a study titled "Enhancing tourist loyalty through location-based service apps: Exploring the roles of digital literacy, perceived ease of use, perceived autonomy, virtual-content congruency, and tourist engagement." The study concludes that contemporary tourists increasingly rely on applications when making travel decisions in specific areas. The authors highlight the significance of digital literacy, emphasizing the importance of user-friendly interfaces and intuitive design. The findings further confirm the positive impact of extending app functionalities that are easily controllable and contribute to user satisfaction. This aligns with creating environments that influence the target audience's perception, emphasizing the importance of utilizing digital spaces to communicate with tourists. It extends to understanding the concepts and methods of experience-driven outcomes that impact sales, serving as a motivation for enhancing digital awareness in a tangible manner. This approach leverages the recognition of desirable outcomes as a foundation for fostering meaningful digital perception. Our results add to those of Deschênes (2024) Collaborative technologies as a social binder Our additional analysis support the idea that employees' technical skills associated with the use of digital technologies contribute to social proximity in the workplace, because these skills facilitate the use of the technologies that keep employees connected with their work environment. This result is particularly important, as it adds to the still-fragmentary knowledge of the effects of using collaborative technologies in a hybrid work context.

The results of this study revealed four key components of digital skill acquisition: environmental inputs, sensory inputs, specific experiences for interpretation, and interpretation of sensory data. These components form a coherent framework that facilitates digital skill development through perceptual processes. The results of this study are consistent with Gibson (2019) ecological approach to perception and learning, which emphasizes the role of the environment in skill acquisition.

The first component, environmental inputs, serve as a foundational component for digital skill acquisition. The results of this study are consistent with research by Wang & Chen (2021) who showed how carefully designed digital environments can enhance learning outcomes by providing appropriate stimuli and feedback mechanisms. The environmental context creates what Henderson et al. (2022) call "digital learning environments," interactive opportunities that guide users toward skill development in a natural way.

Regarding sensory inputs, the results of this study are consistent with recent sensory research by Martinez-Rodriguez et al. (2023) who showed how multiple sensory channels contribute to digital skill development. The multimodal nature of digital skill acquisition, involving

visual, auditory, and kinesthetic information. It appears to enhance the learning path and improve skill retention.

The third component, the specialized experience for interpretation, builds on Koehler & Thompson (2020) work on the development of expertise in digital environments. Their longitudinal study showed that structured digital task exposure gradually builds interpretive frameworks, allowing learners to recognize patterns and develop more complex digital skills over time.

Finally, the interpretation of the cognitive data component is consistent with the cognitive processing theory proposed by Lee & Park, (2022) who found that active interpretation of digital experiences leads to stronger skill development than passive exposure. This finding suggests that metacognitive awareness plays a key role in transforming digital experiences into concrete skills, with the interactions between these four components creating what Kumar et al. (2023) describe as a "cognitive learning cycle" in digital skills development. This cycle facilitates the recognition and learning of skills through repeated learning, interpretation, and integration of digital experiences. This finding is particularly important because it demonstrates that cognitive processes can be used to enhance digital skills development by coordinating with learning processes and integrating them with other subject areas for further development of desired skills.

2. The assessment of the suitability of the recognizing digital skills model to promote community business learning and creative tourism in the Mekong riverside area of Nakhon Phanom Municipality demonstrated a high level of overall appropriateness. In examining individual components, the results of the evaluation of the suitability of the digital skills awareness model to promote community business learning and creative tourism in the Mekong River area, Nakhon Phanom Municipality, showed a high level of overall suitability, especially the second component, which focuses on essential digital skills through the experiences of successful entrepreneurs, which was highly evaluated by experts.

This issue may be due to the explanation starting from tangible success leading to motivation for self-development, which is consistent with the research of Thompson & Liu (2022) who found that learning through success models affects the inspiration and development of digital skills in community entrepreneurs. Communicating through examples close to reality and through concepts that can be applied to one's own work will enhance awareness and facilitate learning more easily.

The results of the research are also consistent with Kolb (1984) experiential learning theory, which emphasizes the importance of direct experience. Having tangible experiences helps create personal stories to share (a greater emotional connection to the context) as well as a broader perspective on the complexity of impacts within the community. In addition, Wang & Chen (2023) studied and found that learning through direct experiences in a digital context increases the confidence and ability to apply technology to small entrepreneurs. To understand the key components and facilitate positive change.

Rodriguez et al. (2024) conducted a 'phenomenological study of intensive experiential learning for university faculty professional development' and concluded that the experiential learning cycle led to the creation of case studies as an additional way to reach students in the interdisciplinary area of agricultural and natural resource systems. This is consistent with the

research of Henderson & Park (2023) who showed that the cyclical learning model can be applied to digital skills development in a variety of contexts.

In addition, Kumar et al. (2023) found that learning through real-world experiences in a digital context developed problem-solving and creativity skills, which are important skills for entrepreneurs in the digital age. In many ways, this demonstrates the cyclical nature of experiential learning, where learners (in this case faculty) have ongoing experiences as they apply and test new knowledge (teaching others) and then provide the learning experience to their own students.

The significant development of digital skills among participants, exceeding the specified threshold of more than 80% after the implementation of the four-component model, is consistent with several research studies on the development of integrated digital literacy that leads to higher levels of targeted digital skills. In line with the research of Viktoriia et al. (2024) studying on the topic of "Improvement of higher education: how to bridge the digital divide during the transformation?", it was concluded that the issue of promoting digital skills is that the creation of a digital ecosystem involves the development of a single digital environment to support the effective interaction of participants. This system covers regulations, standards, information infrastructure, personnel and data security. It also includes the development of a data protection system within the electronic information system and the suppression of cybercrime. In addition, it requires the development of Internet resources and service characteristics to deploy high-speed broadband communication channels and create a wireless access network to electronic databases. In addition, it creates a mobile-oriented environment for users, allowing users to access electronic information through various devices. Therefore, for the above reasons, it can be explained that the development of higher digital skills can be attributed to external factors or the communication of awareness through a stimulating and motivating environment, in line with Bahri et al., 2024. Therefore, for the above reasons, it can be explained that the development of advanced digital skills can occur from external factors or communication to create awareness through a stimulating and motivating environment, Therefore, for the above reasons, it can be explained that the development of advanced digital skills can occur from external factors or communication to create awareness through a stimulating and motivating environment, which is consistent with the research study of Bahri et al. (2024) who studied the relationship between students' perception of learning media, digital literacy skills, and self-regulated learning and learning outcomes of students in rural areas. It can be concluded that students' perception of learning media, digital literacy skills, and self-regulated learning support and have a moderate relationship with intellectual learning outcomes at the same time. The results of the study found that students' perception of learning media directly and significantly affect students' intellectual learning outcomes. The contribution of students' perception of learning media to intellectual learning outcomes, including digital literacy, directly and significantly affects intellectual learning outcomes, both at the individual and concurrent levels. In addition, it was found that digital literacy contributed to students' intellectual learning outcomes more than the contribution of students' perception of learning media and self-regulated learning. Therefore, from the issue of the format that can promote digital awareness, it is directly affected by understanding what will affect oneself, resulting in intrinsic motivation. Using examples that are consistent with what is needed can be used to design activities in learning other subjects effectively.

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