

# Interdisciplinary Community Based Learning to Enhance Competence of Digital Citizenship of Social Studies Pre-Service Teacher's in Thai Context: Pedagogical Approaches Perspective

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Received: March 18, 2022

Accepted: May 3, 2022

Online Published: May 17, 2022

doi:10.5430/jct.v11n4p171

URL: <https://doi.org/10.5430/jct.v11n4p171>

## Abstract

The objectives of this research were to 1) synthesize competency of digital citizenship and concepts of interdisciplinary community-based learning and 2) propose guidelines of interdisciplinary community-based learning management for promoting digital citizenship of pre-service teachers in the Thai context. The research was qualitative research conducted by using content analysis according to the grounded theory to obtain study results according to the objectives. The study results were as follows:

1. The results of synthesizing competency of digital citizenship and concepts of interdisciplinary community-based learning revealed that digital competencies which led to digital citizenship were as follows: Digital Access, Digital Literacy, Digital Commerce, Digital Safety and Resilience, Digital Participation and Agency, Digital Emotional Intelligence, Digital Creativity and Innovation, Digital Communication, Digital Ethics, Digital Health, and well-being. For concepts of interdisciplinary community based learning through pedagogical approaches, they consisted of Academically Based community Service / Civic learning / Environmental Education / Placed-based Education / Service Learning / Work-based Learning/Tech Pre /Ethical Case Studies/Social Engagement/Discipline-Based Model Problem-based Learning / Capstone course (a short course emphasizing self-study from actual and complicated problems) /Service Internship / Youth Apprenticeship / Community-Based Action Research Model /Experience-Based Career Education Volunteerism / Pre-Service Teacher /Field Education / Independent Study Modal and 2. Guidelines of managing interdisciplinary community based learning for promoting digital citizenship of pre-service teachers in the Thai context revealed that important issues leading to interdisciplinary community based learning management consisted of Contextual Knowledge / Academic study /Citizenship/ Community-based Learning/ Interdisciplinary approach/ Environmental Education/ Experiential Learning / Lifelong Learning.

**Keywords:** community-based learning, interdisciplinary, digital citizenship, pre-service teachers, pedagogical approaches

## 1. Introduction

The world is stepping into a fully limitless world without boundaries to access information. Communication is convenient and fast. Media of modern technology have roles in conducting life with people of all ages, especially among adolescents. There has been fast distribution of various media and information technologies. There has been sending and receiving messages through information technology. Using digital technology is part of human behaviors becoming more extensive. This has been influenced by the belief system and valued directions determined by the majority of society. From the survey results of using technology for the education of Basic Education Commission, it was found that technology is a thing which increases educational opportunities to become convenient, fast, equal, and thorough in learners of all ages and every educational system for formal education, non-formal education, and informal education. With correct use and knowing benefits, technology can be used as an efficient instrument to organize teaching and learning and build equality in receiving news conveniently, fast, and keeping up with world situations regularly with no limits of learning (Ministry of Education; B.E. 2558; National Statistical

Office, B.E. 2561). From studying research works regarding digital skills, it was found that world citizens under the age of 18 at present are born and grow with information technology facilitating life. As a result, conducting life is mostly consistent with the use of information technology a lot such as teaching and learning, communication and good exchanging and services, etc. Among these world citizens, they grow up to be the main power of the future world society (Mangkhang & Kaewpanya, 2021). Therefore, educational management must focus on building the learning process to be ready for changes of the disruptive social and be an important mechanism in driving national development to be progressive and sustainable.

The dichotomous approach positions things in the dimension of being good or bad, positive or negative, and black or white. It is an approach to view the world with limitations and affects the living, creative ideas, and comments in thinking. It also brings people to many possibilities (Michael Henderson & Geoff Romeo, 2015). When learners' ideas-driven social actions constructively can reenergize people and practices are equivalent to communication, students and teachers share knowledge, build a learning environment that connects to the locality with regional, national, and international issues. This helps students see their roles as contributors to bring about well-being in the life of people surrounding them, the connection between the classroom and the world, to build activities in the classroom to connect with social issues, to connect with the meaning of real life, to support leadership and working together and develop problem-solving skills. Students also see values on other people's strength to achieve together, develop honesty and responsibilities. Situations are raised and opportunities benefit students in terms of making students discover that their values based on honesty and etiquette benefit individuals and society (Renee Hobbs, 2011).

Connecting learning approaches with information technology and digital literacy is necessary for building values and merging previous knowledge which is the mass experience of learners originating from Traditional Ecological Knowledge with postmodern knowledge. The objective of doing this is to lead learners to use their won competency to build the learning process which is in balance with their styles of learning by using the community base surrounding learners on academic potentials, empirical learning, and building changes to the society further.

## **2. Methodology**

### *2.1 Research Forms*

The research was qualitative research conducted by using content analysis according to the grounded theory. The data obtained from academic documents, textbooks, academic articles, and research works were analyzed. Study results were presented in the descriptive form by using qualitative data supporting data synthesis and description.

### *2.2 Research Samples*

Samples in the research consisted of academic documents, textbooks, academic articles, and research work about the competency of digital citizenship and concepts of interdisciplinary community-based learning.

### *2.3 Instruments Used in the Research*

Analysis forms of document content regarding the competency of digital citizenship and concepts of interdisciplinary community-based learning.

### *2.4 Data Collection*

- (1) Study theories, concepts, and research works regarding the grounded theory
- (2) Design analysis of document content regarding the competency of digital citizenship and concepts of interdisciplinary community-based learning.
- (3) Have analysis forms of document content regarding the competency of digital citizenship and concepts of interdisciplinary community-based learning checked by experts before implementation
- (4) Improve analysis forms of document content regarding the competency of digital citizenship and concepts of interdisciplinary community-based learning according to suggestions of experts.
- (5) Use analysis forms of document content regarding the competency of digital citizenship and concepts of interdisciplinary community-based learning to analyze academic documents, textbooks, academic articles, and research works about the competency of digital citizenship and concepts of interdisciplinary community-based learning accounting.
- (6) Summarize research results and synthesize guidelines of interdisciplinary community-based learning

management for promoting digital citizenship competency of pre-service teachers in the Thai context

### 2.5 Data Analysis

The researcher analyzed the data according to the purposes by using the process of content analysis according to the grounded theory to summarize issues according to data groups and analyzed data relationships before presenting research results in the descriptive form by using qualitative data to support data analysis and description.

## 3. Results

For the research at this time, the researcher classified data obtained from the study and presented research results according to the determined objectives whereby the research results can be summarized as follows:

3.1 Regarding the Synthesis Results of Competency of Digital Citizenship and Concepts of Interdisciplinary Community-based Learning, It was found that the Researcher Analyzed Digital Citizenship Competency and Concepts of Interdisciplinary Community-based Learning, and Summarized the Research Results as Follows:

**Table 1.** Synthesizing Competency of Digital Citizenship

Competency	Principles and conclusion	References
Digital Access	- Technological access	[Tan Thomas, 2011]
	- Learning to use new technology to develop digital skills to be modern	[Ministere de l'education et de l'enseignement superieur quebec. 2019]
	- Using digital technology in development or specifically mutual development	[Ministere de l'education et de l'enseignement superieur quebec. 2019]
	- Mobilization of all available resources including experts and data experts	[Ministere de l'education et de l'enseignement superieur quebec. 2019]
	- Retrieve findings and screen digital data and content	[The European Commission's science and knowledge service 2020]
	- Data management and digital content	[The European Commission's science and knowledge service 2020]
Digital Literacy	- Technical problems solving	[The European Commission's science and knowledge service 2020]
	- Critical assessment	[Jonghwi Park, Jian Xi Teng, 2020]
	- Use digital instruments and data efficiently	[Jonghwi Park, Jian Xi Teng, 2020]
	- ICT literacy and information literacy	[Jonghwi Park, Jian Xi Teng, 2020]
	- Use the technology fast and suitably	[Tan Thomas, 2011]
	- Understanding with a judgment regarding propaganda and patterns in medias	[Divina Frau-Meigs, 2019]
	- Selecting data suitably	[Ministere de l'education et de l'enseignement superieur quebec. 2019]
	- Developing thinking with judgment by taking into consideration using digital technology	[Ministere de l'education et de l'enseignement superieur quebec. 2019]
	- Data and information literacy	[Llywodraeth Cymru Welsh Government 2018]
	- Assessment of data and digital content	[The European Commission's science and knowledge service 2020]
Digital Commerce	- Critical thinking	[Michalis Ioannou, Tharrenos Bratitsis, Loanna Tsolopani 2016]
	- Making decision	[Michalis Ioannou, Tharrenos Bratitsis, Loanna Tsolopani 2016]
	- Knowing how to become consumers with effectiveness in new digital technology	[Tan Thomas, 2011]
	- Developing entrepreneurs' abilities and independence through digital technology	[Ministere de l'education et de l'enseignement superieur Quebec. 2019]
	- Digital use for keeping and developing future working life	[Ministere de l'education et de l'enseignement superieur quebec. 2019]

Competency	Principles and conclusion	References
Digital Safety and Resilience	- Defending oneself from dangers in other forms in digital areas	[Jonghwi Park, Jian Xi Teng, 2020]
	- Understanding children's rights, personal data, privacy, and respect	[Jonghwi Park, Jian Xi Teng, 2020]
	- Digital safeguarding or self-defense	[Jonghwi Park, Jian Xi Teng, 2020]
	- Digital resilience	[Jonghwi Park, Jian Xi Teng, 2020]
	- Rights of digital responsibilities	[Tan Thomas,2011]
	- Learning about the natural dangers of technology and self-defense	[Tan Thomas,2011]
	- Unity in developing the society where people care for one another	[Divina Frau-Meigs,2019]
	- Courage of citizens in the aspect of having conversations about risks for protecting human rights	[Divina Frau-Meigs, 2019]
	- Participate in non-violence disputes	[Divina Frau-Meigs, 2019]
	- Issuing a permit and owning digital copyrights	[Divina Frau-Meigs, 2019]
	- Digital identification data management	[Llywodraeth Cymru Welsh Government 2018]
	- Personal data protection and privacy	[The European Commission's science and knowledge service 2020]
	- Health protection and well being	[The European Commission's science and knowledge service 2020]
	- Data sources related to identity digital	[The European Commission's science and knowledge service 2020]
	- Understanding about stealing or damaging other people's works	[Michalis Ioannou, Tharrenos Bratitsis, Loanna Tsolopani 2016]
	- The law regarding performing duties correctly	[Tan Thomas, 2011]
	Digital Participation and Agency	- Building interactions equally and having positive influences towards the society through ICT
- Shared diplomacy and working together		[Jonghwi Park, Jian Xi Teng, 2020]
- Citizens' participation		[Jonghwi Park, Jian Xi Teng, 2020]
- The project of participation through exchanging opinions with classmates		[Ministere de l'education et de l'enseignement superieur quebec. 2019]
- Participating socially through using digital services of the public sector and the private sector		[The European Commission's science and knowledge service 2020]
- Working together and working as a team		[Michalis Ioannou, Tharrenos Bratitsis, Loanna Tsolopani 2016]
Digital Emotional Intelligence	- Showing emotions in internal digital correspondence and among people	[Jonghwi Park, Jian Xi Teng, 2020]
	- Self-awareness	[Jonghwi Park, Jian Xi Teng, 2020]
	- Self-control	[Jonghwi Park, Jian Xi Teng, 2020]
	- Self-motivation	[Jonghwi Park, Jian Xi Teng, 2020]
	- Skills between people	[Jonghwi Park, Jian Xi Teng, 2020]
	- Attention	[Jonghwi Park, Jian Xi Teng, 2020]
	- Cyberbullying and skills of problems solving	[Divina Frau-Meigs,2019]
	- Corresponding with digital technology	[The European Commission's science and knowledge service 2020]
	- Attention	[Michalis Ioannou, Tharrenos Bratitsis, Loanna Tsolopani 2016]
Creativity and digital innovation	- For showing oneself and making a survey on building content by using	[Jonghwi Park, Jian Xi Teng, 2020]
	- Creative literacy	[Jonghwi Park, Jian Xi Teng, 2020]

Competency	Principles and conclusion	References
Digital Communication	- Expression	[Jonghwi Park, Jian Xi Teng, 2020]
	- Skills of media production	[Divina Frau-Meigs, 2019]
	- Skills of creative ideas and effectiveness in working together	[Divina Frau-Meigs, 2019]
	- Skills of looking forward	[Divina Frau-Meigs, 2019]
	- Using digital tools to promote combination and respond to various needs	[Ministere de l'education et de l'enseignement superieur quebec. 2019]
	- Solving various problems through digital technology	[Ministere de l'education et de l'enseignement superieur quebec. 2019]
	- Using the creative approach and creativity with digital technology use	[Ministere de l'education et de l'enseignement superieur quebec. 2019]
	- Problem solving and building models	[Llywodraeth Cymru Welsh Government 2018]
	- Building knowledge and the innovation process	[The European Commission's science and knowledge service 2020]
	- Being able to communicate with other people continuously	[Tan Thomas,2011]
Digital Ethics	- Communicating with other people appropriately, adapting oneself with the context, and controlling digital communication connection	[Ministere de l'education et de l'enseignement superieur quebec. 2019]
	- Producing content through digital technology	[Ministere de l'education et de l'enseignement superieur quebec. 2019]
	- Storing and sharing	[Llywodraeth Cymru Welsh Government 2018]
	- Social interactions and cross-cultural interactions	[Michalis Ioannou, Tharrenos Bratitsis, Loanna Tsolopani 2016]
	- Technological use and communication devices	[Michalis Ioannou, Tharrenos Bratitsis, Loanna Tsolopani 2016]
	- Digital citizens with responsibilities in the new society	[Tan Thomas, 2011]
	- Being citizens with ethics in the digital age	[Ministere de l'education et de l'enseignement superieur quebec. 2019]
	- Taking into consideration social, cultural, and philosophical diversities	[Ministere de l'education et de l'enseignement superieur quebec. 2019]
	- Becoming aware of the impact of using digital technology on physical and mental well-being	[Ministere de l'education et de l'enseignement superieur Quebec. 2019]
	- Digital etiquette	[Tan Thomas, 2011]
Digital Health and well being	- Being aware of behavioral norms	[The European Commission's science and knowledge service 2020.]
	- Being responsible for the society	[Michalis Ioannou, Tharrenos Bratitsis, Loanna Tsolopani 2016]
	- Promoting and protecting health and well-being	[Jonghwi Park, Jian Xi Teng, 2020]
	- Health and digital completeness	[Tan Thomas, 2011]
	- Building and developing good identity to health	[Divina Frau-Meigs, 2019]
	- Health and livelihood	[Llywodraeth Cymru Welsh Government 2018]

Source: Jarupongputtana et al. (2022)

**Table 2.** Synthesizing Concepts of Interdisciplinary Community-based Learning

Classification	Pedagogical Approach	Key Concept
	Academically Based Community Service	Students learn from taking actions and services when they participate in the community where they live. Learning, research, and operation still go on during normal school days through good integration. Partner schools build integration curricula with problem-solving guidelines [Atelia Melville, Amy C. Berg, Martin J. Blank. 2006].
	Civic Education	[Atelia Melville, Amy C. Berg, Martin J. Blank. 2006] Supporting clearly for political participation of citizens and students reflect intentional and universal emphasis regarding receivers of citizens, provide enthusiastic learning experiences so that students will be connected between academic learning and citizens' participation, focus on ideas and concepts necessary for democracy according to the constitution, open opportunities for students to see the connection between democratic concepts and their own life [Atelia Melville, Amy C. Berg, Martin J. Blank. 2006].
	Environmental Education	Ecological concepts with significance to the technological environment promote in-depth knowledge regarding environmental problems, skills of being citizens required in participating in solving problems, and building time used to increase personal responsibilities and internal control places [Atelia Melville, Amy C. Berg, Martin J. Blank. 2006].
	Placed-based Education	Schools and communities cooperate actively to make local places become good places for learning, working, and living, practicing skills and new responsibilities. They function as academicians and citizens in their own communities, expanding when learning is getting more profound and profound. This involves the administration of provinces, teachers, students, and more community participation. Strategies of interdisciplinary learning are rooted in things existing in the community. Focusing on the locality energizes students' academic participation while it is promoting true citizenship and preparing people to have a better life in places where they choose [Atelia Melville, Amy C. Berg, Martin J. Blank. 2006].
	Service Learning	Build knowledge through teaching the practical community lesson, service experiences through the project of group services continuously. Communication which reflects through the practical community lesson opens opportunities for students to receive an evaluation of actual operation and to learn in the real world [Julius Jwan, years not identified].  [Andrew Furco 1996] Programs of service-learning are different from other methods in the empirical study. They intend to benefit service providers and clients equally as well as make sure that learning occurs [Andrew Furco 1996].  Students participate in relationships with one another. Students can connect their experiences in the community with connected academic reflection and mutual working. The partner community is advised, supported, and promoted to have a variety of populations. Students have efficient interactions. The partner community has voices as a participant in the management curriculum, predicts self-development, cultural appreciation, and views that services are worthwhile experiences [The Center for Service and Leadership University of Washington Tacoma, years not identified].

	Methods of teaching attract students by connecting community services with academic education, bringing learning to life, and making students participate in education [Atelia Melville, Amy C. Berg, Martin J. Blank. 2006].
Work-based Learning & Tech Pre	Schooling strategies help the youth have academic skills and important employment. Standards are determined throughout the curriculum. Importance is placed on strictness, association, and relations [Thomas R. Owens Changhua Wang 1996].
Ethical Case Studies	Opportunities in situation analysis and decision-making practices with ethics. Students write case studies regarding the issue of ethical disputes which they face in the service facility, consult about situations, and identify themselves how they will respond [David Lisman, Colorado college referred in Kim Davidson 2015].
Social Engagement	Allow students to present works apart from learning, things to learn to review previous concepts., using concepts and discipline tools, overall forms, and design management of activities of these personal activities and in every project. Producers in our community participate in learning and persuade the local community of their own, to convince the local government or responsible officers of maintenance from the local community [Anne-Lise Halvorsen, Nell K. Duke, Stephanie L. Strachan, and Cathy M. Johnson 2018.].
	Community services in participation of students in activities focusing on providing services mainly as well as benefits of service activities for the receiver. Students will receive certain benefits from additional learning how their services can make difference in conducting life. Clients [3 1] promote connection to the community at the local level and the global level. This also connects learners with activities according to experiences in the real life of the community. The project of foreign exchange for students, social participation, and sustainable investment [UNESCO 2014].
Discipline-Based Model	Reflecting on their experiences regularly connects the curriculum content with the community experience [Worcester 2009].
Problem-based Learning	- Looking for true solutions along with the community. Working together with members of the community is understanding problems or social needs specifically. This can be used to determine and propose guidelines for solving community problems truly [Glenn Bowen. 2007]. - Consultants work for clients to understand problems or needs of the community, especially for giving suggestions to the community or developing guidelines of problem-solving and emphasizing inequality between the university and the community [Worcester 2009].
Capstone course (short courses emphasizing self-study from actual and complicated problems)	The general course is for the major subject and the youth in the discipline and offers especially for senior students who will apply knowledge which they obtained throughout working in the course and integrate with related service work [Worcester 2009]. - To survey new topics or synthesize students' understanding regarding their disciplines, changing from the theoretical world to the practical world by helping them build communication professionally and collect personal experiences [Rosfazila Abd Rahman.2019].
Service Internship and Youth Apprenticeship	Allow students to participate in service activities mainly to propose students to receive services which help increase learning or understanding in issues related to specialized fields [Andrew Furco

	1996].
Community-Based Action Research Model	<p>It is more intensive than the learning course along with the general community whereby students work, and build works valuable to the community and students will receive benefits from experiences equally [Thomas R. Owens Changhua Wang 1996].</p> <p>Participatory action research is an important method in developing interferences and changes within the community and searching groups, understanding, and solving problems by social systems through advice and support from students. The staff of teachers collect, analyze and interpret data. After that, they report research results and reinforce community potentials by combining knowledge with actions to bring about social changes [ Glenn Bowen. 2007].</p> <p>Free choices for students with high experiences in community work. Students work closely with the staff of teachers to learn research methodology while they work as community supporters [Worcester 2009].</p>
Experience-Based Career Education	<p>The project of academic apprenticeship uses the classroom and the community in providing action profession survey based on the expertise of businessmen and data sources of other data sources. Moreover, students learn onsite actual use with objectives for learning about occupations which students are interested in through direct experiences, developing self-respect, and respecting other people, developing abilities in thinking freely, practicing strategies of problem-solving. Students become learners who are enthusiastic and instill a desire in lifetime learning. They also increased awareness about technology and places in the workplace, develop abilities in positive correspondence with adults. They become aware of individual participation in society. Skills of communication and team building [Nick Runyon 2021].</p>
Volunteerism	<p>Students' participation in activities emphasizes the principle of providing services. The main benefactors are clients [Andrew Furco 1996].</p>
Pre-Service Teacher	<p>Developing the competency of teacher students requires changes according to world situations. Innovation of area-based learning should be sought to respond to diversities and changes in the disruptive society which can be managed in the real classroom (onsite) and in the virtual reality classroom (online) [ Sandra Patricia Lastra, Norma Constanza Duran, Deyssi Acosta. 2018].</p>
Field Education	<p>Provide opportunities in related combined courses services but without integrating completely with academic education formally. The fact that students conduct services is part of the program designed to reinforce understandings to students in major fields by placing importance on prepared services mainly [Andrew Furco 1996].</p>
Independent Study Modal	<p>Teachers are specially managed to finish additional work or survey more in-depth subject matters. The major efforts in general which staff of teachers, students, and community representatives have made in terms of working actively in order to determine learning targets and community outcomes [Worcester 2009].</p>

Source: Jarupongputtana et al. (2022)



*3.2 Regarding the Approach of Interdisciplinary Community-based Learning Management to Promote Competency, from Synthesizing Main Issues, It was found that Important Components Which Led to the Learning Process for Building Digital Citizenship of Pre-service Teachers in the Thai Context Consisted of*

**Academic study:** Academic knowledge is essential in building a link to the learning process and the goal of reflecting experiences to synthesize students' understanding.

**Contextual Knowledge:** Knowledge related to context and spatial identity This enables learners to be durable in learning from familiar experiences and to be able to build on their knowledge on direct experience.

**Citizenship:** Active learning makes the process of creating active citizens through criticism and higher order thinking skills and can create change for society as a citizen.

**Community-based Learning:** The mass of experience learners have is essential for building on learning that is relevant to local knowledge and to create partnerships with the community.

**Interdisciplinary approach:** The diversity of knowledge means that learners are faced with different situations. Interdisciplinary learning to connect dimensions of information based on knowledge from multiple disciplines push students to apply and have options for solving problems in real-world situations.

**Environmental Education:** Physical and cultural characteristics that influences the well-being of people in the dimensions of local, regional, national and global citizens, which is a holistic knowledge that can connect to learning dimensions

**Experiential Learning:** Experiential learning that affects the persistence of learners' learning from experiences that learners interpret or reflect and can apply in a variety of situations.

**Lifelong Learning:** Education development to promote quality of life open learning to find value and meaning according to one's potential, focusing on developing skills related to lifestyle to create stability and sustainability.

**Digital Literacy:** Media literacy information and digital is the defense that creates the media analysis process and turn learners into media producers to create social change based on online communities and real contexts.

Learning and teaching are characterized by community-based learning for community-based learning, students study the course content, which is the world context, and go to the field to collect data. This is a requirement to compare the content appearing in the course which is the world context with globalization and the community with localization based on the interpretation from resource management of the community through theoretical spatial-temporal intelligence to activities that build interactions of students and the community. This consists of a revision of literature and related research work, brainstorming, learning exchanging to the community by entering the field, discussion, and reflection to connect various and complicated knowledge of the world with universality. This also leads to incorporating and applying concepts from the course to be used with the district which is related to and consistent with the identity of the community. Moreover, interdisciplinary community-based learning is increasing areas of building interactions with learners in the field of social studies subjects and students from various faculties, increasing opportunities in sharing and using knowledge of each science which is diverse for communication and cooperation in designing the project according to their own potentials on the learning style of students together with the knowledge obtained from literature and research works and theories which appear and are recognized internationally. This is also integrated with mass experiences through folk wisdom which are knowledge and skills accumulated for a long time and blended well with the community context.

Designing activities for learners contacting the community through entering the field, observation, or learning about what is nearby, which is related to the way of life is still an identity of their own. The objective is to distill attitudes, leading to viewing the world relatively with the community. This is consistent with service learning (Anuchat Puangsamlee and Krittaya Archavanichvakun, B.E. 2542: 130) supporting the agreement between schools, communities, and houses by bringing about opportunities in meeting closely. This will cause stimulation to bring about the cooperation of parents in the education of children. As a result, parents become part of the educational process and begin to be responsible for the education of children together with the school, making education stronger. Moreover, the community will also benefit from service-learning resulting from the way students are instilled with a feeling of true citizenship. The youth will perceive more regarding the balance between rights and responsibilities of people in the democratic community. As a result, they will act with awareness of things useful for the community and the nation.

Building project-based learning, community-based learning, and area-based learning will make learners learn and understand the local context, learning facing local problems and using the process full of relationships of learners

and people in the community, leading the organism to common solutions. This is consistent with PBL learning (Vicharn Panich, 15: B.E. 2555) which helps students learn or understand theories and principles in subjects through practices or making contact by themselves but not by memorizing. This helps them understand theories in the deep dimension with more connection and see values of knowledge in the context of real life, making learning enjoyable and alive. The Ministry of Education or Educational Areas or Foundations with objectives to promote children's learning can organize a competition for PBL works or so-called project competition in the province or in the educational area or in the country. The goal is to stimulate the learning atmosphere by acting within the area. The atmosphere in the area is full of learning promotion of students and children whereby learning from doing activities in real life is focused on.

Punya Mishra (2019) presented TPACK: Technological Pedagogical Content Knowledge (TPACK) consisting of content knowledge, pedagogical knowledge, and technological knowledge. However, important components are knowledge contexts which are everything from available teachers' perception, technology to teachers, knowledge about policies of schools, districts, the state, or at the national level being conducted. The scope of knowledge in which teachers combine technology in teaching is knowledge of doing by teachers by changing from themselves. Therefore, we should develop knowledgeable teachers (content) and an overall picture of TPACK together with contextual knowledge of teachers as well. It is very important for teachers to take part in pushing efficiency and success of learning development related to integrated technology. Integrating contextual knowledge with the conceptual framework emphasizes limitations of organizations and situations in which teachers work for success, views teachers as a designer of the curriculum in the classroom, intrapreneurs who understand organizational contexts, and have driven energy leading to sustainable changes.

The work of Eric L. Ball and Alice Lai (Page 261:2006) makes comment and revise literature regarding place-based education and community-based learning in taking into consideration ingredients of the learning process through the method of area-based teaching for liberal arts and humanities. Besides teaching regarding local matters, the interests of learners get attention through textbooks, invention, and local production of cultural performances to build local power correctly according to practices of local culture through literature and arts. We give reasons to emphasize that the method of area-based teaching meets the needs and is the key leading to in-depth data and faults clearly in terms of human ecology and critical thinking through areas amidst facing results causing to be the margin of the area with various dimensions of political cultures. This is also sent through the sediment of the mentioned mass experiences to build the area-based project from the cooperation of students and villagers. The mentioned lesson is learned and distilled to students and schools to build sustainability in balance according to the community context further.

#### 4. Discussion

*4.1 The Results of Synthesizing Digital Citizenship Competency and the Concepts of Interdisciplinary Community-based Learning are Consistent with Mangkhang, & Kaewpanya (2021) roposing that for us to become Digital Citizens, We must have Skill Sets, Technological Knowledge, and High-leveled Thinking or so-called "Digital Literacy".*

This requirement is for using the information in the cyber world, knowing to protect oneself from risks in the online world, understanding rights, responsibilities, and important ethics in the digital age, and using the internet in political, economic, and social-cultural participation for oneself, the community, the country, and the world. This is in line with the concept of Dewey (Arthur.g wirth 1966) viewing that using pedagogical approaches which energize learners to learn by doing. This places importance on learners to become the ones who build knowledge by themselves. Interdisciplinary community-based learning is connecting the environment in the community to build knowledge and experiences in taking actions to reinforce the conscience of digital citizenship. Moreover, future digital citizens must not only be aware of the importance of using online areas as if they were a form of public areas where everyone is free to use to express their opinions, share data and propagate information but they must also realize that the online area is still a common area where everyone can come in to share. Therefore, there must be regulations or norms of the digital society which will help control the mentioned area without threatening privacy or building insecurity to users.#

*4.2 The Approach of Interdisciplinary Community-based Learning Management for Promoting Digital Citizenship Competency of Social Studies Pre-service Teachers in the Thai Context Shows that the Thai People in the Media Age Regard Schools as a Meeting Place but not a Learning Place.*

In the eye of teachers, this group is children with ADHD, who lacks discipline and does not respect teachers. If a

study is conducted closely, it turns out to be found that this group of children has abilities in several aspects. For example, people in the media age can absorb or check several things at the same such as letters, sound, color, pictures, and movement. Moreover, they can arrange discontinuous data. People in the digital age can complete several missions at the same time. People in the digital age live in an unreal world, making them misunderstand and become confused between the real world and the real world (Jintana Sudjanun, B.E. 2554: 330). This is consistent with Bob Pearlman translated by Vorapoj Rungrueng and Athip Jittaruek (B.E.2554:199) with the finding that many reveals new behaviors and potentials of current students. The main idea is that students learn best when they participate and students at this age can work for every work. The work of Mark Prenki demands that the method of teaching from telling what to do and lecturing should be changed to a new method of teaching which allows children to teach themselves based on teachers' advice.

Data keeps coming in a lot in the information age. Learners have nurtured skills in data management. They implement those things according to their own interests. Therefore, it is important that we as a teacher should adjust the learning process to pull out potentials and the limit of those capabilities to be used in the learning areas with balance without making the learning process reduce the identity of learners. This is in line with Paitoon Sinlarat (B.E. 2549:20) viewing that Thai education is a receiving culture. This has made the Thai society in thinking, educational, social, and economic aspects become a form of receiving consumption and foreign products throughout. We should be informed, self-creative, and have a Thai-style thinking base. We must change producing culture. We must create and think towards our own production. This way will bring about informed knowledge and freedom.

Likewise, Mangkhang & Kaewpanya (2021) proposed that social studies pedagogy aims to build "Yong Futurist" who will grow up to be a pro-active citizen in the future society who recognizes the values and growth of citizens in becoming an important mechanism in driving the society and building changes. Moreover, pro-active citizens must perform duties according to their roles efficiently to build a sandcastle cloud society that is beautiful and equal in the post-digital society which is going to happen.

## 5. Suggestions

### 5.1 Suggestions from the Research

- Skills of designing interdisciplinary community-based teaching for promoting digital citizenship competency of basic-education students should be developed.
- Social studies pre-service teachers should be allowed to have experiences in developing digital media to integrate interdisciplinary community-based learning management before doing an apprenticeship for the teaching professions in the school.
- Cooperation with the civic society should be built in order to mutually develop digital citizenship competency for social studies pre-service teachers before the operation in the school.

### 5.2 Suggestions for Next Research

- The form of using guidelines of interdisciplinary community-based learning management should be studied in order to promote digital citizenship competency of pre-service teachers in the Thai context.
- Efficiency of the form of using guidelines of interdisciplinary community-based learning to promote digital citizenship competency of pre-service teachers in areas with different contexts should be compared.
- Durability of digital citizenship competency of social studies pre-service teachers performing their duties as in-service teachers in the school should be studied.

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