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Guidelines for Real-Life Learning Management in Happiness Farmer Field Schools to Promoting Sustainable Citizenship in Secondary School Students

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Abstract

This research aims to: 1) investigate the current state and concepts of real-life learning in Thai and international educational contexts; 2) explore the needs for developing real-life learning management based on the Happiness Farmer Field School approach to promote sustainable citizenship among secondary school students; and 3) design an innovative real-life learning program based on the Happiness Farmer Field School approach to promote sustainable citizenship among secondary school students. Employing a participatory action research (PAR) design, this qualitative study gathers data from 21 key informants. Data collection tools include: 1) open-ended questionnaires on the challenges and needs of schools regarding the development of innovative real-life learning based on the Happiness Farmer Field School approach to promote sustainable citizenship among secondary school students, distributed to school administrators, teachers, and parents; and 2) questionnaires on the essential content for students in the area regarding the development of innovative real-life learning based on the Happiness Farmer Field School approach to promote sustainable citizenship among secondary school students. The research findings revealed the following: 1) Current learning management practices and school curricula are misaligned with learners' contexts, rendering the content impractical for real-life application, while the assessment methods fail to reflect the learners' contexts and lack stakeholder participation; 2) There is a need for curricula and learning management that are relevant to the local context,

allowing stakeholders to participate in designing learning experiences that align with the community's needs; 3) Diverse assessment methods that are appropriate for the students' context are required; and 4) A synthesized knowledge framework for real-life learning management, based on the Happiness Farmer Field School approach to promote sustainable citizenship in secondary school students, has been developed, comprising five learning units: 1) Young Community Agricultural Explorers, 2) Agricultural Social Thinkers**,** 3) Future Thinkers, 4) Young Agricultural Innovators, and 5) Social and Environmental Entrepreneurs.

Keywords: Current Condition and Need, Happiness Farmer Field Schools, Sustainable Citizenship, Secondary School Students

1. Introduction

Citizenship is a crucial concept for the advancement of democracy. A successful democracy requires not only a sound constitution but also citizens who embody democratic principles (Samkoset, 2011). Citizenship is a state of belonging to a society, a people, and a nation, grounded in social contract theory, which grants rights and responsibilities to individuals (Bureekul et al, 2012). Philosophers, historians, and political scientists have long debated which conceptions of citizenship best promote a flourishing democracy. As Connolly (1983) argued, the concepts of democracy and citizenship are constantly contested, and there is no single formula for success. For example, the work of John Dewey, perhaps the most influential figure in shaping the discourse on education and democracy, did not lead to definitive solutions. Scholars and practitioners have interpreted his ideas in various ways, demonstrating the fluidity and evolving nature of these concepts. Citizenship education is a process of holistic human development. It cultivates knowledge across disciplines while fostering ethical conduct, responsibility, rationality, awareness of rights and liberties, discipline, and a commitment to the common good over individual interests. It also promotes understanding of one's role as a citizen within a nation. This education empowers individuals to apply their knowledge for personal growth, social progress, and national development. Currently, the implementation of citizenship education within educational institutions is crucial. It can be argued that education is the foundation of citizenship building and a key mechanism for preparing effective citizens who contribute meaningfully to society. To achieve sustainable development, promoting citizenship education reflects an approach to human resource development that prioritizes the cultivation of quality citizens for a sustainable future. Beyond the definition and importance of citizenship discussed above, it is essential to consider how to foster sustainability within citizenship across social, ecological, and economic dimensions. Sustainable citizens possess the skills and abilities to maintain a balance within these three interconnected dimensions. This ensures that progress in one area does not compromise the others, enabling a harmonious and enduring path towards a better future

This aligns with the issues and trends in Education for Sustainable Development (ESD), which states that ESD is an education that "allows all people to acquire the knowledge, skills, attitudes and values necessary to build a sustainable future." It also means "incorporating key sustainable development issues into teaching and learning, such as climate change, disaster risk reduction, biodiversity, poverty reduction, and sustainable consumption. It also requires participatory teaching methods that empower learners to change their behavior and practices for sustainable development. ESD promotes competencies such as critical thinking, future visioning, and collaborative decision-making (UNESCO 2011; UNICEF 2011; de Haan 2010)." ESD is a dynamic concept and a form of new educational visioning focused on empowering people of all ages to take responsibility for creating a sustainable future (UNESCO, 2002, 2005, 2014a). ESD is interdisciplinary and transdisciplinary in nature. No single discipline can claim ESD as its own, but all disciplines can conduct ESD independently or as a group.

Furthermore, the National Education Plan B.E. 2560-2579 (2017-2036) emphasizes the cultivation of democratic citizenship among youth. This is achieved through curriculum development and instruction on civic education in schools. Democratic citizenship, based on 21st-century citizenship competencies, applies the framework of the Partnership for 21st Century Skills, which proposes a concept of 21st-century citizenship divided into three dimensions: Civic Literacy, Global Citizenship, and Digital Citizenship. This framework also categorizes democratic citizenship competencies into three levels: Informed Citizenship, Engaged Citizenship, and Active Citizenship. This aligns with the Competency-Based Curriculum approach (2562), which designates civic competence as a core competency to be instilled in learners. The goal is to foster in Thai youth the ability to collaborate effectively, demonstrate strong leadership, and become active Thai citizens with global mindedness. These citizens are responsible, participate in societal affairs, uphold social justice, and contribute to peaceful coexistence.

The Education Innovation Area Act B.E. 2562 mandates the establishment of education innovation areas to enhance the quality of basic education, a crucial foundation for Thailand's human capital development. This aims to cultivate well-rounded individuals with qualities such as inquisitiveness, creativity, effective communication skills, the ability to collaborate with diverse individuals, global awareness, and vocational skills tailored to individual aptitudes. The Act encourages collaboration between government bodies, local administrative organizations, the private sector, and civil society to enhance the quality and efficiency of basic education while reducing inequality. The Act outlines four key objectives for these education innovation areas: 1) To research and develop educational innovations and learning processes that elevate student achievement, with provisions for disseminating successful models to other basic education institutions. 2) To reduce educational disparities. 3) To decentralize authority and grant autonomy to educational agencies and pilot schools within these innovation areas, promoting agility and effectiveness in educational administration and management. And 4) To establish and develop collaborative educational management mechanisms between government bodies, local administrative organizations, the private sector, and civil society within these innovation areas. This Act encourages the development of learning innovations tailored to the specific needs of each area. This presents both a

challenge and an opportunity to enhance the quality of education and reduce educational inequality, aligning with the Act's objectives. Recognizing this potential, the researcher proposes an educational innovation titled "Developing Learning Innovations for Real-Life Applications through the 'Happy Agricultural School' Approach to Foster Sustainable Citizenship in Secondary School Students". This initiative aims to align education with local contexts by developing curricula and learning approaches based on the Farmer Field Schools (FFS) model. This model emphasizes real-life experiences and utilizes an interdisciplinary approach to cultivate sustainable citizens within the community.

Originating in Indonesia through an FAO project promoting Integrated Pest Management (IPM) in rice, the Farmer Field School (FFS) approach fosters an understanding of complex agro-ecosystems and has been adapted to various starting points, from IPM to sustainable production systems, agroecology, value chains, nutrition, and community life skills. Farmers are empowered to transform practices and lead in shaping their future: FFS embodies ecosystem-based sustainable agriculture and farmer empowerment. Currently implemented in over 90 countries, FFS empowers an estimated 400,000 to 1 million farmers, livestock keepers, and fishers annually. Each FFS group, composed of individuals from the same locality with shared interests in specific agricultural challenges or improving the sustainability of their farming systems, is supported by a trained facilitator who employs non-formal education methods to encourage group learning. Members meet regularly throughout the growing season, often weekly, to conduct experiments, identify production problems, brainstorm solutions, and evaluate the effectiveness of local versus improved practices within their specific context. This process fosters empowerment, extends beyond the field, and promotes social capital building at the community level. FFS groups are established as part of national extension programs, UN agencies, NGOs, or farmer organizations. Key activities in FFS programs include training facilitators, developing locally adapted training curricula, establishing and running FFS groups, monitoring and evaluation, and developing follow-up activities to amplify the impact of FFS implementation. The cost of running an FFS for a season ranges from 800 to 1550 USD, approximately 40-80 USD per FFS member. Resources are also required for facilitator training, project coordination, and technical support to the groups. In 2018, the global FFS platform was established by the Food and Agriculture Organization of the United Nations (FAO) as a hub for stakeholders involved in FFS implementation worldwide, becoming a reference center for establishing quality FFS that achieve interconnected and integrated impacts at the community level and beyond (Food and Agriculture Organization of the United Nations, 2022).

The study employs a community-based learning (CBL) approach, a process that fosters collaborative learning among the community, educational institutions, students, and teachers. This approach focuses on shared community issues such as culture, economy, agriculture, medicine, and local history. CBL promotes collaborative learning among different community entities to exchange knowledge and strengthen the community sustainably. Widely used in education, this approach encourages learners to seek knowledge independently from community resources, guided by five principles (Rittikub, 2018) Problem-Based: using real-world problems as a starting point for learning; 2) Resource: utilizing community resources, local wisdom, and natural resources; 3) Scaffolding: providing support to overcome challenges and analyze problems; 4) Coaching: shifting the role of teachers to facilitators who guide rather than directly instruct; and 5) Collaboration: encouraging learners to exchange knowledge, share perspectives, and expand their understanding.

Melaville et al. (2006) demonstrate that community-based learning (CBL) not only enhances the effectiveness of student learning within educational institutions, but also fosters significant connections between learners and their communities, cultivating a heightened sense of civic responsibility. CBL promotes awareness of the surrounding community and society, from the family level to broader contexts, encompassing ethical considerations, political engagement, and empathetic co-existence within society (Melaville et al., 2006). In essence, this approach connects learners, schools, and communities, fostering a sense of citizenship and potentially leading to educators who prioritize social engagement over traditional institutional ties, acting as agents for the advancement of social justice (Farnsworth, 2010).

While community-based education (CBE) has been widely applied in educational research across various disciplines, often focusing on social, cultural, and resource-based learning within communities, Mundel & Schugurensky (2008) highlight a crucial aspect: CBE is not merely a pedagogical approach, but a catalyst for civic engagement. It fosters a sense of shared knowledge and collective identity by connecting individuals and communities through formal and informal learning experiences, facilitating the development of knowledge and skills. This, in turn, promotes community management grounded in participation and volunteerism, essentially utilizing shared knowledge and experiences derived from community resources to cultivate skills, values, and attitudes that drive community development.

Community-based learning (CBL) is an experiential learning approach designed to foster student learning and development by engaging them in activities relevant to individuals and community needs (Flecky, 2011). CBL integrates curriculum content with the community through practice-based learning, allowing students to learn by doing in real-world community situations. This involves collaboration between teachers, students, and community members, such as exploring environmental issues, local occupations, wisdom, and culture. Critical reflection is central to CBL, enabling students to gain curriculum knowledge while developing a deeper understanding of their community. CBL aims to cultivate diverse skills, including critical and analytical thinking, essential for the 21st century, while fostering ethical values, positive attitudes, and a sense of responsibility as part of the community. This approach benefits both the community and learners by achieving curriculum objectives and community-defined goals, contributing to positive social change and sustainable community strengthening (Panit, 2014; Thongkhao, 2017; Bednar and Simpson, 2013; Bedri, Frein, & Dowling, 2017).

Recognizing the limitations of traditional education systems, the researcher proposes the "Happy Agricultural Way" educational approach as a solution to address these challenges. This approach emphasizes quality education rooted in community-

based learning, focusing on developing age-appropriate skills through a transdisciplinary approach. By breaking down disciplinary boundaries and integrating community-based learning, this model aims to cultivate essential competencies, particularly citizenship, rather than solely focusing on subject-specific knowledge acquisition. The goal is to foster a sense of responsibility and care for their community, empowering students to contribute to its future development. This study explores a community-based experiential learning approach that promotes citizenship through transdisciplinary learning innovation, drawing inspiration from Farmer Field Schools (FFS). This model necessitates a shift in teaching practices, assessment methods, and school-wide processes, requiring teachers to adopt transdisciplinary teaching skills and students to become active learners. Additionally, it calls for collaborative support from school administrators, school committees, parent-teacher associations, and the community. This innovative approach addresses the challenges faced by small schools with limited resources, multi-age students, and teacher shortages by integrating cross-disciplinary teaching and community knowledge to foster citizenship competencies and cultivate sustainable citizens for the community.

2. The Objectives of the Research

This study attempts to examine the following objectives:

1) To investigate the current state and concepts of real-life learning in Thai and international educational contexts

2) To explore the needs for developing real-life learning management based on the Happiness Farmer Field School approach to promote sustainable citizenship among secondary school students.

3) To design an innovative real-life learning program based on the Happiness Farmer Field School approach to promote sustainable citizenship among secondary school students.

3. Methodology

This research employs a participatory action research (PAR) approach, which is structured in four phases (Naiphat, 2011), encompassing. This research received ethical approval for human subjects, and the researchers established measures to maintain confidentiality and safeguard the rights and interests of participants. All research requirements and conditions were fully explained to the participants prior to their involvement.

3.1. Step 1: Planning

This study investigates the concept of real-life learning within the Thai and international educational contexts, aligning with the challenges and needs of schools in developing innovative learning approaches. Specifically, it examines the "Happy Agricultural School" model for promoting sustainable citizenship among secondary school students. The research focuses on schools under the Chiang Mai Secondary Educational Service Area Office, particularly those designated as innovative educational pilot schools in Chiang Mai Province, Thailand.

The research sites selected for this study were three secondary schools that demonstrated a willingness to implement the innovative "Happy Agricultural School" approach to real-life learning, with the aim of promoting sustainable citizenship among their students.

3.2. Step 2 Acting

To establish familiarity and rapport, the researcher purposively selected three school administrators (one from each of the three participating schools), nine teachers (three from each school), and nine parents (three from each school) who demonstrated an interest in developing teaching and learning processes connected to students' real lives and their communities. The researcher introduced themselves to the participants, explaining the research objectives and scope, and engaged in both participant and non-participant observation of activities within the schools and communities.

Community engagement was established through a multi-step process. Initially, formal permission to conduct research was obtained from the university. Subsequently, the researcher contacted community leaders (gatekeepers) and collaborated with local teachers. This facilitated communication and exchange of information, enabling the collection of essential baseline data.

Data on the current condition and the need for developing real-life learning based on the "Happy Farming Way" to promote sustainable citizenship among high school students were collected through interviews. The researcher analyzed data from focus group discussions and document analysis in line with the research objectives using content analysis. Following the approach of Hubbard & Power (1999), the qualitative data analysis involved four steps: (1) preparing data from focus group discussions and questionnaires; (2) reviewing research questions; (3) organizing data by structuring relationships within the data; and (4) analyzing data by identifying main and sub-themes to summarize key findings. The research findings are presented descriptively.

3.3. Step 3 Observing

The study utilized data collected through fieldwork, categorized into two types: 1) Primary Sources, obtained from interviews with local experts, and 2) Secondary Sources, comprising information gathered from texts on real-life learning concepts within both Thai and international educational contexts.

This study synthesizes a knowledge base for real-life learning based on the "Happy Agriculture Way" to promote sustainable citizenship among secondary school students.

3.4. Step 4 Reflecting

This study presents findings on the current state, needs, and a synthesized approach to real-life learning based on the principles of "Sufficiency Agriculture" to promote sustainable citizenship among high school students. This presentation aims to engage administrators, teachers, and parents in critical reflection and discussion.

A focus group discussion was conducted among school administrators, teachers, and parents to gather insights and perspectives on content, activities, and desired outcomes for developing a real-life learning program based on the principles of "Sufficiency Economy Philosophy" to promote sustainable citizenship among secondary school students. This collaborative approach aimed to identify key elements and strategies for integrating the philosophy's core values of moderation, reasonableness, and self-immunity, along with practical agricultural skills and knowledge, to foster students' holistic development and responsible citizenship in a rapidly changing world.

Population and sample group

The study utilized a purposive sampling technique to select 21 key informants, comprising three school administrators (one from each of the three participating schools), nine teachers (three from each school), and nine parents (three from each school). This selection strategy ensured the inclusion of diverse perspectives and experiences relevant to the research focus.

3.5. The Tools Used in the Study

A questionnaire was utilized to investigate the challenges and needs of a school in developing real-life learning innovations based on the "Happy Agricultural School" approach, aimed at promoting sustainable citizenship among secondary school students. This questionnaire, employing an open-ended format, gathered data from school administrators, teachers, and parents, allowing for in-depth qualitative insights into their perspectives on the implementation of this innovative approach.

A questionnaire was used to ascertain the priorities of students in the area regarding the development of real-life learning innovations based on the "Happy Agricultural School" approach to promote sustainable citizenship among secondary school students. Respondents were asked to rank the importance of content identified in a preliminary questionnaire. To ensure validity, the research instrument was reviewed by experts with experience in place-based education. Data analysis was then conducted systematically to draw conclusions.

3.6. Data Collection

Documentary Study by gathering data on real-life learning management in happiness farmer field schools to promoting sustainable citizenship in secondary school from documents such as books, journals, and other geographical databases. This involves collecting foundational information on Real-Life Learning Management in Happiness Farmer Field Schools to Promoting Sustainable Citizenship in Secondary School and using the gathered data to analyze educational issues moving forward.

Situational Analysis involves collecting data on real-life learning management in happiness farmer field schools to promoting sustainable citizenship in secondary through interviews with a sample group consisting of school administrators, teachers, and parents of students. The tool used is an unstructured interview form on Real-Life Learning Management in Happiness Farmer Field Schools to Promoting Sustainable Citizenship in Secondary School.

Designing and Development involves designing and developing real-life learning management in happiness farmer field schools to promoting sustainable citizenship in secondary. This is followed by developing it into a real-life learning handbook to promoting sustainable citizenship. The effectiveness is then evaluated by citizenship learning management expert and educational innovation and learning design expert. The assessment results and recommendations are used to refine the handbook for greater effectiveness. The tool used is a suitability assessment form for real-life learning handbook to promoting sustainable citizenship.

Evaluating the outcomes of using real-life learning management in happiness farmer field schools to promoting sustainable citizenship in secondary school to review student’s knowledge and competencies through an analysis of student’s sustainable citizenship assessment forms. The analysis results are then used to discuss the research findings. The tool used is a sustainable citizenship assessment form for students.

4. Results

The current study was conducted to investigate the current state and concept of real-life learning in Thai and international educational contexts. Utilizing open-ended questionnaires and interviews, the research explored the challenges and needs of schools in developing innovative learning approaches based on the "Happy Agricultural School" model to promote sustainable citizenship among secondary students. Data was collected from school administrators, teachers, and parents, revealing three key findings: 1) a misalignment between school curricula and student contexts, with an overemphasis on standardized measurements outlined in the Basic Education Core Curriculum B.E. 2551, neglecting the actual needs of students and communities; 2) instructional practices failing to connect with students' real-life experiences and provide applicable knowledge; and 3) an evaluation system that lacks diversity, relies solely on teacher assessment, and excludes participation from stakeholders. The findings gleaned from school administrators, teachers, and parents clearly illustrate a significant tension between standardized curricula and contextualized learning. Specifically, the emphasis of the Basic Education Core Curriculum B.E. 2551 on standardized assessments often overlooks the diverse needs and potentials of students and communities. This in turn leads to instructional practices that fail to connect with students' real-life experiences and impart applicable knowledge. The problem is further compounded by an evaluation system that lacks diversity and relies solely on teacher assessment. Addressing these issues necessitates a paradigm shift from rigid curricula to a flexible curriculum design that integrates local context-based learning to align with students' lived realities. Furthermore, educators should be encouraged to develop innovative teaching methods that promote participatory learning and real-world problem-solving. Concurrently, evaluation systems must expand to include diverse

stakeholders, such as the community, parents, and students themselves, to reflect genuine and holistic development, ultimately fostering well-rounded and sustainable citizens.

The Study investigates the need to develop real-life learning based on the "Happy Agricultural Way" to promote sustainable citizenship among secondary school students. Using a questionnaire to gather data from students in the area, the research explores key content and prioritizes needs for developing innovative, real-life learning based on the "Happy Agricultural Way" school approach. The findings reveal that schools prioritize: 1) curriculum and instruction aligned with the local context, culture, lifestyle, and community issues; 2) engaging stakeholders, parents, and students in designing hands-on, context-based learning that fosters 21st-century skills relevant to the community and global events; and 3) diverse assessment methods aligned with student contexts and involving multiple stakeholders.

Table 1. **The Challenges and Needs of Schools in Developing Real-Life Learning Innovations Based on the "Happy Agricultural School" Approach to Promote Sustainable Citizenship among Secondary School Students, as Perceived by School Administrators, Teachers, and Parents**

Learning Management Guidelines	Challenges	Needs
Curriculum	The curriculum exhibits a misalignment with the learners' context, excessively emphasizing the standards and indicators outlined in the Basic Education Core Curriculum B.E. .2551This rigid adherence to standardized benchmarks fails to address the realities of students' lives and the specific needs of their communities.	The curriculum and pedagogical approaches should be aligned with the spatial context, reflecting the specific characteristics of the local community. This entails incorporating the local culture, lifestyles, and community challenges into the learning process, ultimately empowering students to contribute to problem-solving within their community.
Teaching Method	The pedagogical practices are misaligned with students' lifestyles, and the content lacks real-world applicability.	The study emphasizes a collaborative approach to curriculum design, actively involving educational stakeholders, parents, and students in shaping a hands-on, context-based learning experience. This participatory model prioritizes the development of 2 1 st-century skills, ensuring relevance to the community context, school environment, and current global events.
Evaluation	The evaluation process is characterized by its diversity and responsiveness to the specific context of the students, with a multi-faceted approach that incorporates the participation of various stakeholders.	The evaluation process is characterized by its diversity and responsiveness to the specific context of the students, with a multi-faceted approach that incorporates the participation of various stakeholders.

This study synthesized a body of knowledge on real-life learning management based on the "Happy Agricultural Way" approach to promote sustainable citizenship among secondary school students. Data was collected through questionnaires administered to students, administrators, teachers, and parents to identify key content needs for developing innovative, real-life learning based on this approach. The findings, synthesized and presented in Table 2, reveal the key content needs for developing this innovative learning model to promote sustainable citizenship among secondary school students, as perceived by administrators, teachers, and parents.

Table 2. A Synthesis of Key Findings from Students, Administrators, Teachers, And Parents Regarding the Development of Real-Life Learning Innovations Based on the "Happy Agricultural School" Approach to Promote Sustainable Citizenship Among Secondary School Students

School	Important Knowledge Content of Students in The Area	Core Competencies Required	Synthesize Content
School 1	.1 Lanna traditional chemical-free agriculture .2 Land allocation for cultivation .3 Sustainable agricultural development	1. Vocational skills 2. Higher-order thinking processes 3. Local patriotism	1. General Knowledge of Agricultural Geography in Communities 2. Agricultural Geography of My Community

School	Important Knowledge Content of Students in The Area	Core Competencies Required	Synthesize Content
	.4 Production and distribution		- Physical Geography - Human Geography 3. The Advantages of Agricultural Practices in My Home 4. Costs, Problems, and Current Situation in My Community 5. My Vision for the Future of My Community 6. Business Model Canvas 7. Designing a Prototype Innovation for Community Development 8. Presenting the Prototype Innovation for Community Development 9. Implementing the Innovation in the Community 10. Social and Environmental Entrepreneurship
School 2	1. Safe agriculture with a sense of social responsibility .2 Responsible new-approach agriculture .3 Value creation for agricultural products 4. Agricultural technology utilization 5. Agricultural land management 6. Agricultural market management	1. Communication skills 2. Technology skills / Digital literacy 3. Collaboration skills 4. Vocational skills 5. Local patriotism skills 6. Sustainable agriculture	
School 3	1. Smart agriculture 2. Safe agriculture 3. Agricultural entrepreneurship	1. Higher-order thinking 2. Social entrepreneurship 3. Local patriotism	

Based on the table, the researcher synthesized the crucial knowledge of students in the area and the essential competencies required to design learning content that aligns with the local context and needs. This involved developing a learning unit focused on real-life learning experiences rooted in sustainable agricultural practices to promote sustainable citizenship among secondary school students. The synthesis resulted in 10 key content areas: 1. General knowledge of agricultural geography in the community; 2. Specific knowledge of agricultural geography in my community (physical geography in my community, human geography in my community); 3. The agricultural advantages of my home; 4. Costs, problems, and situations in my community; 5. My dream for the future of my home; 6. Business Model Canvas; 7. Designing prototype innovations to develop the community; 8. Presenting prototype innovations to develop the community; 9. Implementing innovations in the community; and 10. Entrepreneurship for society and the environment.

The researcher developed a body of knowledge into a Local Agricultural Geography course comprising five learning units: 1) Young Agricultural Community Surveyor (1 hour of general knowledge on agricultural geography and 2 hours on the physical and human geography of the local community); 2) Thinker for Agricultural Society (1 hour on local agricultural practices and 2 hours on local cost, problems, and situations); 3) Thinkers for the Future (1 hour on envisioning the community's future and 2 hours on Business Model Canvas); 4) Young Agricultural Innovators (2 hours on designing prototype innovations for community development and 1 hour on presenting them); and 5) Social and Environmental Entrepreneurship (2 hours on implementing innovations and 1 hour on social and environmental entrepreneurship), totaling 15 hours as shown in Table 3.

Table 3. **The Course Structure and Learning Content of the "Real-Life Learning Management Guide Based on the Happy Agricultural Way to Promote Sustainable Citizenship for Secondary School Students"**

Unit	Content	Study time
Unit 1 Young Agricultural Community Surveyor	1. General knowledge of agricultural geography in the community (1 hour) 2. Specific knowledge of agricultural geography in my community (2 hours) - Physical geography in my community - Human geography in my community	3 hour
Unit 2 Thinker for Agricultural Society	1. My Home, My Agricultural Way of Life (1 hour) 2. Costs and Problems: The Situation of My Community (2 hours)	3 hour
Unit 3 Thinkers for the future	1. The Future of My Dream Home: A Vision for Reality (1hour) 2. Business Model Canvas: A Framework for Entrepreneurial Success (2hours)	3 hour

Unit	Content	Study time
Unit4 Young Agricultural Innovators	1. Design of Prototype Innovations for Community Development (2hours) 2. Presentation of Prototype Innovations for Community Development (1 hour)	3 hour
Unit 5 Social and Environmental Entrepreneurship	1.Implementation of Innovation in Community Settings (2 hours) 2. Social and Environmental Entrepreneurship (1 hour)	3 hour
		15 hour

However, as the educational management for the Innovative Education Area of Chiang Mai Province is specific to the spatial context, the real-life learning management following the "Happy Agriculture Way of Life" approach to promote sustainable citizenship among high school students has been adapted. This adaptation involves incorporating Design Thinking to foster sustainable citizenship competencies within the local context of Chiang Mai. The Sustainable Development Model of Design Thinking, presented in the 2019 article "A Design Thinking-Based Study of the Prospect of the Sustainable Development of Traditional Handicrafts" by Wen-Tao Li et al., guides the development of five learning units. These units correspond to the five stages of Design Thinking: Empathize, Define, Ideate, Prototype, and Test.

5. Discussions

The current state of education management in the area adheres to the Basic Education Core Curriculum B.E. 2551, which centralizes knowledge and fails to reflect the local context. Furthermore, the school curriculum does not align with the learners' context, including their social environment and lifestyle, particularly the agricultural way of life prevalent among students in the area. This disconnect renders the content of teaching and learning inapplicable to real-life situations. Therefore, it is necessary to provide opportunities for educational stakeholders, parents, and students to participate in designing teaching and learning methods that emphasize hands-on practice and place-based learning. This approach should focus on developing 21st-century learning skills that are relevant to the community and school context, while also keeping pace with current global events and addressing societal issues. Research by Satyanu-rak, et al (2011) on establishing participatory processes between schools and local communities led to curriculum content that fostered a clearer understanding of the community's realities, promoting community adaptation and awareness of its own potential. However, challenges arise when projects end or collaborators relocate (Sahawean, 2003). Consequently, a sustainable learning approach is crucial to ensure that the benefits remain with the learners and that the community can continue to drive progress. This aligns with the Issues and trends in Education for Sustainable Development, which posits that Education for Sustainable Development empowers all individuals with the knowledge, skills, attitudes, and values needed to shape a sustainable future. It is a dynamic concept and a new educational vision focused on empowering people of all ages to take responsibility for creating a sustainable future (UNESCO, 2002, 2005, 2014a). As a multidisciplinary and transdisciplinary field, no single discipline can claim exclusive ownership of Education for Sustainable Development; instead, all disciplines can contribute, either individually or collaboratively.

In the context of schools in the Chiang Mai Educational Innovation Area, the analysis revealed the following strengths: (1) abundant and diverse cultural capital within the surrounding communities, conducive to community-based education; (2) geographical and ethnic diversity; (3) strong support and interest from school administrators and teachers in driving educational initiatives through the Chiang Mai Educational Innovation Area approach; (4) pilot implementation of learning activities aligned with the local community context; and (5) rich natural resources and environmental assets. Weaknesses identified include: (1) a school curriculum misaligned with the learners' context, with an overemphasis on standards and indicators from the Basic Education Core Curriculum B.E. (2551), failing to address the realities of student and community life; (2) instructional practices that do not cater to students' ways of life, with content lacking real-world applicability; and (3) assessment methods incongruent with the learners' context, lacking diversity and relying solely on teacher evaluation without stakeholder participation. The opportunities for developing place-based education in this context include: 1) curriculum development linked to the school's community, 2) utilizing local natural resources for learning, 3) potential for community-based pedagogy, 4) transforming the community into a cultural learning resource through existing social and cultural capital, and 5) the school's readiness and desire to promote place-based competency development. However, threats exist, such as: 1) standardized national curriculum and assessments limiting curriculum design and pedagogical freedom, alongside centralized examinations, 2) a disconnect between student outcomes and community needs, 3) rapid technological advancements leaving learners with inadequate technological skills, and 4) unequal resource distribution due to policy, resulting in small schools lacking basic resources and technology to support learning.

This study synthesized a body of knowledge on real-life learning management based on the "Happy Agricultural Way" approach to promote sustainable citizenship among secondary school students. The development of a local knowledge-based learning package on sustainable living through the lens of "Sufficiency Agriculture" for secondary school students reflects the changing landscape of rural Thai society in its transition to modernity. This aligns with Puangprayong & Noonin (2018) framework, which identifies key factors shaping modern rural life, including activities, interests, and expressions of opinions. The embedded knowledge within the community reflects its identity, and as Kanjanaphan (2021) argues, utilizing local knowledge

systems negotiates the relationship between knowledge and place. This, in turn, influences perceptions, meanings, and local identity, leading to a dynamic interplay and potential clash between traditional and modern knowledge systems.

7. Recommendation

Participatory Action Research (PAR) emphasizes collaborative engagement to address problems within their specific context. Researchers have the flexibility to adapt procedural steps based on sufficient information, enabling them to refine or choose new problem-solving methods as needed. This adaptability ensures that the approach aligns with the specific needs and challenges of the community context.

Current conditions and needs should be studied using quantitative methods. in order to make the data complete and consistent with the aims of the research.

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