

Community-based Transdisciplinary Learning Innovation in Social Studies Through Miang Wisdom for Promoting Green Citizenship of Secondary School Students.

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ABSTRACT

The objectives of this research were to 1) study and collect Miang wisdom in the northern region of Thailand, 2) to propose approaches for managing community-based transdisciplinary learning in social studies and 3) to study the result of managing community-based transdisciplinary learning in social studies for promoting green citizenship. The Mixed Methods in Education Research were conducted. The target groups consisted of 1) 15 local scholars and community leaders, 2) 5 learning management experts and 3) 30 secondary school students, accounting for a total of 50 people. Purposive sampling was used in order to obtain data from the target groups. The instruments used in the research were 1) unstructured interview forms, 2) suitability assessment forms of approaches for managing community-based transdisciplinary learning and 3) green citizenship skills assessment forms. Qualitative data analysis was conducted through content analysis. The presentation was in the form of descriptive analysis. Descriptive statistics were used to find mean and standard deviation. Study results revealed that 1) “Miang” is a local plant of Lanna people. It is plant associated with Lanna people traditions, beliefs, wisdom and spirituality, it is The Culture of Ethnobotany in Northern Thailand. Miang comes from *Camellia Sinensis Asamica* in the family of Theaceae which grows as a shrub. 2) The result of developing approaches for managing community-based transdisciplinary learning have 4 steps called “CMUD Area-based Learning Approach (CALA)”. The overall efficiency assessment results of approach were at the highest level. And 3) The result of community-based transdisciplinary learning management helped promoting green citizenship of secondary school students in an overall picture at a high level.

Keywords

Community-based Learning, Transdisciplinary Learning, Social Studies, Miang wisdom, Green citizenship

Introduction

The concept of Target 4 for sustainable development in guaranteeing equal education throughout and promoting lifetime learning to everyone. Being successful covers quality education. This will reinforce the proven belief that education is one of the driving forces efficient for sustainable development. Moreover, there are objectives for organizing occupational trainings with reasonable prices equally. Gender inequality and disparity are removed in order to succeed in accessing universal principles for higher education qualitatively and developing learning skills reaching one's own local community. This relies on the environment as an important lesson in integrating learning in other disciplinary fields. (United nation, 2015).

Regarding building opportunities and equality according to 20-year National Strategies, 2018-2037, importance is placed on drawing the power of sectors, namely private sectors, civil society, local communities for mutual driving by supporting associations of people in thinking and acting together for the public. Decentralization and responsibilities are directed towards the mechanism of local government

administration. The community is strengthened for self management. The Thai population is prepared for health, economic, social and environmental dimensions so that the population will become quality population and the people can rely on themselves and benefit families, communities and the society as long as possible. Moreover, the government guarantees the access of quality services and welfares justly and throughout (Office of the National Economics and Social Development Council, 2018).

Therefore, education management for sustainable development must focus on increasing local community capacity in participatory self-reliance development and self management with knowledge, virtues and ethics. The impact on life qualities and the environment should not be created, which is in line with the vision of Thailand in terms of security, wealth and sustainability. Regarding education management which focuses on increasing the capacity of the local community, a single discipline learning may not be enough for learning management. Currently, we must depend on multidisciplinary learning and cooperation in every discipline in order to design learning which responds

to the development of global citizenship in the new century. Transdisciplinary Learning approach is a new form of learning and problem solving related to cooperation of sectors of the society including educational institutions for responding to complicated challenges of the society through mutual learning. This will make all knowledge of learners increase, leading to complicated social learning (Regeer, 2002). The objective of transdisciplinary learning is to understand current world in every complicated aspect instead of any particular aspect (Nicolescu, 1997). To build foundation of transdisciplinary learning is a new form of knowledge fulfilling traditional knowledge. Intellectual space is newly created, bringing about transdisciplinary learning resulting from the convergence of different paths of learning (Lattanzi, 1998). As a result, knowledge from the community can be integrated in order to design community-based transdisciplinary learning in social studies.

“Miang” is a local plant. Miang comes from *Camellia Sinensis Asamica* in the family of Theaceae which grows as a shrub. It is a popular plant grown in the upper northern region of Thailand, namely Chiang Mai, Chiang Rai, Mae Hong Son, Lampang, Phrae and Nan. Miang has been a part of way of life, a consumption culture and a foundation of social relationships of the northern people of Lanna for a long time (Chalermchon Boonkiatsakoon, 2007). Miang forest is abundant with natural honey. The product of quality coffee with specific fragrance of Miang flowers is an identity of the community (Charin Mangkhang et al., 2015). The culture of keeping Miang in the mouth of the northern people is an identity which can self-identify the northern people distinctively (Kannarong Bunrueng, Vorapong Trakarnsirinon, 2017). In the context of local education management, the cultural heritage of Miang community has become a common root of learning culture important in knowing rights in order to build equality of citizens and recover wisdom power of the community (Organic Empowerment). This is to be done under the process of learning management (Charin Mangkhang et al., 2015). Moreover, the principle of education management for sustainable development consists of 1) competitive advantage based on resources and institute capacities, 2) capacity in responding to the needs of learners and stakeholders and 3) capacity in adapting to the local context and universality (Anurak Panyanuwat et al., 2014). Therefore, managing cultural plants resources in case of Miang through the educational system is the approach of reforming education to build food security by using the local plant as a base for learning.

Cultural ecology is accordingly a two-way relationship and goes in the opposite direction between people and nature, and nature and culture (Niyapan Wannasiri, 2007) whereby the study on evolution or changes resulting from adaptation

of the society is emphasized. This concept views the society as dynamic or constant changes. Changes result from adaptation to the environment with an important basis which is technology of producing social structures and characteristics of natural environment as a condition. This is suitable with education with modification nature, adaptation related to struggling for survival and helps us understand relationships among human population, social and physical environment of the community or the society (Ngampit Satsanguan, 2008). Synthesis of eco cultural concept through Miang wisdom reflects relationships among nature, cultures and the way of life of the community conveyed in the area of Miang forest.

Green citizenship is the participation of citizens and the government in managing the environment. Although the society has been developed in any directions, citizens must be an important part of developing and caring for natural resources on a regular basis (Amin et al., 2002). It is a frame which adjusts new concepts focusing on building social roles of each individual involving the environment (Spencer Harbo et al., 2017). Therefore, everyone has duties to take care of, keep and conserve them for developing skills and characteristics of green citizenship. Learning must be managed in order to build knowledge and understandings regarding green citizenship, develop skills and green behaviors, and build green ideals and attitudes for students.

For this reason, the researchers have interests in studying Community-Based transdisciplinary learning innovation in social studies through Miang wisdom for promoting strong citizenship of secondary school students. This focuses on building the approach of community-based transdisciplinary learning management in social studies through developed Miang wisdom to be a learning innovation with suitability so that it can be used in managing learning and promoting strong citizenship of secondary school students in schools with the area of different contexts.

Research objective

- 1) To study and collect Miang wisdom in the northern region of Thailand
- 2) To propose guidelines for community-based transdisciplinary learning management in social studies through Miang wisdom for promoting green citizenship of secondary school students
- 3) To study the results of community-based transdisciplinary learning management in social studies through Miang wisdom for promoting green citizenship of secondary school students

Literature Review

Transdisciplinary Learning

The approach of transdisciplinary learning is a new form of learning and solutions related to cooperation among sectors of the society, including educational institutions for responding to challenges through mutual learning. This will make all knowledge of learners increase, leading to complicated social learning (Regeer, 2002). The objective of transdisciplinary learning is to understand current world in every complicated aspect instead of any particular aspect (Nicolescu, 1997). To build foundation of transdisciplinary learning is a new form of knowledge fulfilling traditional knowledge. Intellectual space is newly created, bringing about transdisciplinary learning resulting from the convergence of different paths of learning. Transdisciplinary Learning is a remarkable process in terms of integrating knowledge from multiple disciplines for solving problems of the impact all over the world in order to build new knowledge and to synthesize ideas and perspectives in harmony in every discipline (Lattanzi, 1998).

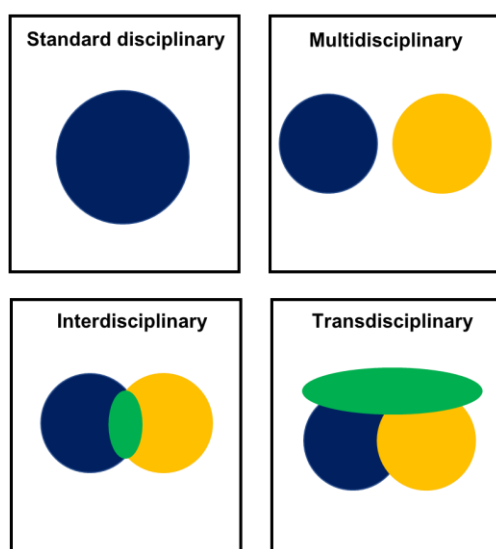


Figure 1. Concept of Transdisciplinary Learning modified from Seaton, A. (2002)

Methods

The researchers conducted mixed methods in education research by using the method of qualitative research to collect and analyze data obtained from the interview form and the method of quantitative research to collect and analyze data obtained from the assessment form. Research results were presented in the form of Descriptive Analysis by using quantitative data and qualitative data to accompany data synthesis and description. with the following steps

1) Documentary Study was conducted by collecting data from documents, books, journals in terms of theories,

concepts and related research work in order to use the obtained data to support the analysis of the study issues.

2) Study on field data (Field Study) was divided into 3 periods as follows:

Period 1- Situational analysis is collecting qualitative data by synthesizing documents and related research work, interviewing village scholars and community leaders with knowledge of wisdom in northern provinces of Thailand were conducted whereby the instruments used were unstructured interview forms about Miang wisdom in the context of the North of Thailand.

Period 2- Design and Development is collecting quantitative data by designing and developing, checking the quality of and finding efficiency of the learning management approach. This had to go through quality checking conducted by experts of area-based education. The instruments used were suitability assessment forms of the community-based transdisciplinary learning management approach in social studies through Miang wisdom for promoting green citizenship of secondary school students to be used for checking the quality of the learning management approach.

Period 3 -The efficiency of the learning management approach was assessed from secondary school students in the northern region of Thailand whereby the instruments used were assessment forms of green citizenship skills from community-based transdisciplinary learning in social studies through Miang wisdom to be used for assessing green citizenship of secondary school students

Methodology

Population and samples

Population used for the study consisted of 3 main target groups: 1) local scholars and community leaders with knowledge regarding Miang wisdom in the northern region of Thailand; 2) learning management experts; and 3) secondary school students in the northern region of Thailand. The researchers selected sample groups for convenience in collecting data and for obtaining data from sample groups with following details:

- 1) Village scholars and community leaders with knowledge regarding Miang wisdom in the context of the North of Thailand whereby Purposive Sampling was used in order to obtain data from the sample group consisting of 15 people;
- 2) Experts of area-based education whereby Purposive Sampling was used in order to obtain data from the sample group consisting of 9 people;
- 3) Secondary school students whereby Purposive Sampling was used in order to obtain data from the sample group consisting of 30 people

Instruments used in the study

Instruments used in collecting data consisted of:

- 1) Unstructured interview forms about Miang wisdom in the context of the North of Thailand;
- 2) suitability assessment forms of the approach of community-based transdisciplinary learning management in social studies through Miang wisdom to be used for checking the quality of the learning management approach;
- 3) green citizenship skills assessment forms to be used for assessing results of learning management

Data Analysis

- 1) Qualitative analysis- The researchers analyzed the data according to the study goal by using interpretation-based data(from the interview) analysis in order to summarize issues according to data groups and to analyze relationships of the data.
- 2) Quantitative analysis- The researchers analyzed the data obtained from the assessment forms by using statistical packages with capacity to analyze data efficiently. The analysis was conducted by using descriptive statistics whereby the results of statistical data analysis were shown with mean and standard deviation.

Results

Regarding the research at the time, the researchers classified the data obtained from the study and presented the research results according to the determined objectives. The study results can be summarized as follows:

1. Studying and collecting Miang wisdom in the northern region of Thailand The research results revealed that Miang is a local plant of Lanna people. It can be found in the upper northern region of Thailand. Miang comes from *Camellia Sinensis Asamica* in the family of Theaceae which grows as a shrub. The process of fermentation is used to produce tastes and properties. The knowledge of Miang wisdom in the context of the northern region of Thailand can be divided into 5 aspects, namely 1) religions and beliefs, 2) green citizenship, 3) self-reliance economy, 4) local history and 5) sustainable development geography.
2. Developing the community-based transdisciplinary learning management approach in social studies through Miang wisdom for promoting green citizenship of secondary school students The researchers conducted the development according to the conceptual frame work "CADDIE Model" of Charin Mangkang et al. (2018). The study results revealed that designing and developing the learning management approach can divide the learning unit into 5 learning units and 10 plans, namely (see Table 1).

Table 1. Details of learning units and community-based transdisciplinary learning plans in social studies

Unit of Learning	Lesson Plans
Learning Unit 1- Thinking skills for sustainable development, consisting of 2 lesson plans	1. Holistic thinking for promoting creative learning 2. Integrating green technology for promoting learning in the 21 st century
Learning Unit 2- Social skills of learning, consisting of 2 lesson plans	1. Participatory learning for promoting and developing green citizenship skills 2. Skills of local wisdom management for developing global citizenship conscience
Learning Unit 3- Skills of innovative learning management, consisting of 2 lesson plans	1. Planning lifetime learning which integrates community-based transdisciplinary learning for promoting area-based learning 2. Green citizenship for promoting sustainable environment conscience
Learning Unit 4- Skills of community base research, consisting of 2 lesson plans	1. Posing questions for promoting community- based learning 2. Setting learning goals for promoting solutions of diversities of the community
Learning Unit 5- Skills of digital society communication , consisting of 2 lesson plans	1. Applying community-based transdisciplinary learning innovation for promulgating empirical learning works 2. Building digital networks for developing lifetime learning society

From the results of designing and developing the learning management approach, there were important findings of the community-based transdisciplinary learning process in social studies through Miang wisdom for promoting green citizenship of secondary school students that it should be participatory operational learning management consisting of 4 steps called "CMUD Area-based Learning Approach" with following details: (see Figure 2).

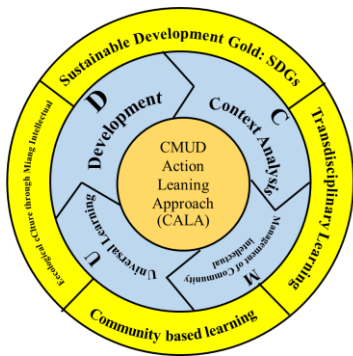


Figure 2. steps of the community-based transdisciplinary learning process in social studies through Miang wisdom or CMUD Area-based Learning Approach (CALA)

1st Step Analysis of the community context (Context Analysis: C) or study on the social context occurring at a moment profoundly based on the process of hiding in the area in order to obtain spatial data which benefit the study. Moreover, analysis of the community context helps reach out to local cultures and way of practice of the community.

2nd Step Management of Community Wisdom (Management of Community intellectual: M) or setting goals of learning which leads to methodology, processes and results required to learn clearly whereby the important goal is to manage knowledge and wisdom appearing in the community

3rd Step Learning for all people (Universal Learning: U) by designing learning through technical concepts and a variety of methods in order to obtain creative learning with efficiency as well as using the principle of community-based transdisciplinary learning in social studies to build backbone students bringing about changes in the community through the green citizenship process of teachers. Learning requires interactions between the classroom and the community as being a valuable learning resource.

4th Step Development to sustainability (Development: D) consists of applying and promulgating knowledge, and interpreting learning lessons for corresponding to changes of situations which keep changing continuously of the world society. This will have an effect on New Normal which changes to a new way of living under unfamiliar new standard principles. Learning with knowledge application and promulgation makes learning management more efficient in the new learning management conditions of the society. The focal point of social studies is to interpret learning lessons by bringing the knowledge appearing from the study to criticize or discuss on the theoretical basis of sociology and humanity such as history, politics, administration, environment, culture etc. This is integrated

with area-based knowledge. The results of the mentioned process is synthesized to be lessons from learning which can be developed, extended to build sustainability of the community.

From the results of assessing suitability of the community-based transdisciplinary learning approach in social studies through Miang wisdom for promoting green citizenship of secondary school students conducted by experts of area-based education, it was found out that (see table 2).

Table 2. Details of suitability of the community- based transdisciplinary learning approach in social studies for promoting green citizenship of secondary school students

Items of assessment	\bar{X}	SD	Interpretation
1. Approach covers the community-based transdisciplinary learning approach.	4.73	0.45	Highest
2. Approach covers student development so that students will have important knowledge, skills, processes,	4.70	0.46	Highest
capacities and desired characteristics.			
3. Approach has activities in line with learning in the 21 st century.	4.65	0.69	Highest
4. Approach has a variety of activities and places importance on learners mainly.	4.62	0.50	Highest
5. Approach uses local medias to promote green citizenship.	4.59	0.60	Highest
6. Approach uses local wisdom and local technological medias to develop them to be an innovation of area-based learning and teaching,	4.57	0.55	Highest
7. Approach promotes changes in terms of cognitive domain, psychomotor domain and affective domain.	4.43	0.79	High

8. Approach assesses progresses of learners based on a variety of methods which are suitable with the nature of subjects as well as the management concept of community-based transdisciplinary learning	4.35	0.59	High
Overall picture	4.58	0.57	Highest

From Table 2, it was found out that regarding the suitability level of the community-based transdisciplinary learning approach in social studies through Miang wisdom for promoting green citizenship of secondary school students, in

an overall picture there was the highest suitability ($\bar{X} =$

4.58). When each item was taken into consideration, the approach of learning management had suitability at the highest level for 6 subject matters, namely Approach of learning management covers community-based

transdisciplinary learning ($\bar{X} = 4.73$), Approach of learning management covers student development so that students will have important knowledge, skills, processes, capacities

and desired characteristics ($\bar{X} = 4.70$), Approach of learning management has activities in line with learning in the 21st

century ($\bar{X} = 4.65$), Approach of learning management has a variety of activities and places importance on learners mainly ($\bar{X} = 4.62$), Approach of learning management uses

local medias to promote green citizenship ($\bar{X} = 4.59$) and

Approach of learning management uses local wisdom and local technological medias to develop them to be an

innovation of spatial learning and teaching ($\bar{X} = 4.57$) respectively.

3. Study of the results of the community-based transdisciplinary learning management in social studies through Miang wisdom for promoting green citizenship of secondary school students (see table 3).

Table 3. shows details of skills of green citizenship of secondary school students

Items of assessment	\bar{X}	SD	Interpretation
1. Holistic thinking skills for promoting creative learning	4.64	0.49	Highest
2. Integrating green technology for promoting learning in the 21 st century.	4.54	0.51	Highest
3. Participatory learning for promoting and developing green citizenship skills	4.46	0.58	High
4. Local wisdom management for developing world citizens conscience	4.29	0.60	High
5. Planning lifetime learning with community-based transdisciplinary learning integration for promoting area-based learning	4.36	0.68	High
6. Green citizenship for promoting sustainable environment conscience	4.57	0.50	Highest
7. Posing learning questions for promoting community-based learning	4.64	0.49	Highest
8. Setting learning goals for promoting solutions of diversities of the community	4.32	0.67	High
9. Applying community-based transdisciplinary learning innovation for promulgating empirical learning achievement	4.39	0.63	High
10. Building digital networks for developing lifetime learning society	4.64	0.49	Highest
On the whole	4.48	0.56	High

From table 3, it was found out that regarding the skill level of green citizenship of secondary school students, in an

overall picture there was high suitability ($\bar{X} = 4.48$). When each item was taken into consideration, there was the skill level at the highest level accounting for 6 subject matters, namely Holistic thinking skills for promoting creative

learning ($\bar{X} = 4.64$), Skills of posing learning questions for

promoting community-based learning ($\bar{X} = 4.64$), Skills of

building digital networks for developing lifetime learning society ($\bar{X} = 4.64$), Skills of green citizenship for promoting sustainable environment conscience ($\bar{X} = 4.57$) and Skills of integrating green technology for promoting learning in the 21st century ($\bar{X} = 4.54$) respectively.

Discussions

1) Regarding the study on and collection of Miang wisdom in the northern region of Thailand, research results revealed that Miang is a local plant of Lanna people. It can be found in the upper northern region of Thailand. Miang comes from *Camellia Sinensis Asamica* in the family of Theaceae which grows as a shrub. The process of fermentation is used to produce tastes and properties. The knowledge of Miang wisdom in the context of the northern region of Thailand can be divided into 5 aspects, namely 1) religions and beliefs, 2) green citizenship, 3) self-reliance economy, 4) local history and 5) sustainable development geography. This is in line with Frank M. LeBar (1967) stating that the fermented tea leaves called Miang were produced and consumed particularly in Shan State of Myanmar lying in the northern region of Thailand and the northern Laos. The people who like keeping Miang in the mouth are the ethnic groups on the upland, namely Pa-laung Wa, Lawa, T'in in Shan State, Khamu and Lamet. This is also in line with Chalermchon Boonkiatsakoon (2007) stating that "Miang" has been a part of way of life, a consumption culture and a foundation of social relationships of the northern people of Lanna for a long time. The finding also revealed that "Miang" is used in the everyday life expression appearing in the statement regarding Miang "Taking my child to raise is like keeping Miang in the mouth" (Northern Thai Culture Encyclopedia volume 15, 1999). This is also in line with Charin Mangkhang et al. (2018) stating that the Miang-eating culture has still been appearing at merit-making events and in way of agriculture of villages in the northern region of Thailand up to these days. This shows that Miang wisdom is suitable knowledge to be used to design community-based transdisciplinary learning in social studies, which leads to skill development of strong citizenship through local cultures of secondary school students. This goal is to be in line with the approach of learning skills promotion of learners of 21st century under changing situations of the world society, having an effect on the new form of learning corresponding to New Normal.

2) Regarding the result of developing the community-based transdisciplinary learning approach in social studies through Miang wisdom for promoting green citizenship of secondary school students, it was found out that community-based transdisciplinary learning management in social studies through Miang wisdom for promoting green citizenship of secondary school should be participatory operational learning management consisting of 4 steps called "**CMUD Action Learning Approach(CALA)**". This is in line with Melaville et al. (2015) stating that community-based learning is the learning process through 6 important strategies, namely 1) Connecting academic matters to community services, 2) Giving education and arranging experiences related to being a good citizen, 3) Learning through the environment in the zone of schools and communities, 4) Learning through places to interests in learning, 5) Organizing experiences in providing services in order to promote learning and social responsibilities and 6) Learning through working under supervision of people who are experienced. This is in line with Charin Mangkhang et al. (2015) who found out that strong local education management must respond to the needs of learners and empower learners to make them appreciate and understand community cultures and local identities and learners are able to design their own learning independently. Moreover, the work of Wuthi Vorawitpinit et al. (2017) suggested that the development form must proceed along with wisdom which is traditional knowledge with virtues in accordance with villagers' traditional way of life. This is not divided into parts. Everything is related to making a living. Moreover, this is also in line with the transdisciplinary learning concept of Lattanzi (1998) and Nicolescu (1997) stating that transdisciplinary learning is a new form of knowledge fulfilling traditional knowledge. Common space of learning is created to bring about transdisciplinary learning. Moreover, community-based Transdisciplinary learning management must connect cooperation of disciplines and the people involved so that they will come to help build the learning process of learners with diversities. This is done to respond to complexity of social phenomena which learners must meet in everyday life.

Regarding the efficiency assessment results of the community-based transdisciplinary learning management approach in social studies through Miang wisdom for promoting green citizenship of secondary school students, it was found out that an overall picture had suitability at a high level. This is in line with Wasee (2009) stating that the community plays an important role in building citizenship of people and a strong community can create careers and incomes for people in the community. People in the community can live together happily and are aware of the value of a man. They respect other people's rights, help one

another and build good citizenship leading to mutual learning and success, bringing about a strong community. This is in line with Duangkaewruan, Phuwanatwichit & Mangkhang (2016) stating that building the learning process together of every sector in the community using participation in thinking, analyzing, planning, practicing, reviewing, applying, focusing on building a self-reliance community of the whole system to be determined in the operation plan of local administration organizations will help support and promote the community to have potentials in sustainable operation. From the point of view of experts, they pointed that the proposed learning management approach was suitable. This can be due to the fact that the mentioned approach is the method of practices which is not contrary to way of life, cultures and social conditions in the area. Moreover, schools promote and support the learning management which emphasizes the local identity as an important base having an effect on community-based transdisciplinary learning constructively.

3) Regarding the result of the community-based transdisciplinary learning management in social studies through Miang wisdom for promoting green citizenship of secondary school students, it was found out that the community-based transdisciplinary learning management approach in social studies through Miang wisdom for promoting green citizenship of secondary school students helped promote green citizenship of secondary school students. An overall picture had suitability at a high level. This is in line with Kelvin Mason (2013) stating that green citizens are people who are interested in the environment, pollution problems and global degradation. They are people who are responsible for the environment with eco-friendly behaviors towards the environment and are willing to volunteer in taking care of resources and the environment together with the community. They should also have audacity to support or object against policies of the government which affect the environment. They should be able to find solutions for environmental problems. Moreover, Graham Smith (2004) determined characteristics of green citizens consisting of as follows: 1) Skills of accessing information for holistic thinking; 2) Skills of increasing capacity of green citizens; 3) Having virtues of green citizens; 4) Political and critical skills for participatory development. The study of Michel Hermsdorf and Fabian Klein-Arndt (2018) proposed characteristics of green citizenship: Green citizens must 1) be aware of changes and the impact of environmental problems; 2) have clear standpoints regarding the environment; 3) be citizens who are eco friendly; 4) not be worried about having advantages or disadvantages; and 5) be aware of the fact that green citizenship is everyone's matter. This is in line with the research result with the finding that skills of green

citizenship of secondary school students were mainly at the highest level, namely skills of participatory learning for promoting and developing green citizenship skills, skills of posing learning questions for promoting community-based learning and skills of building digital networks for developing lifetime learning society respectively.

Conclusion

“Miang” is a local plant of Lanna people. It is plant associated with Lanna people traditions, beliefs, wisdom and spirituality, it is The Culture of Ethnobotany in Northern Thailand. “Miang” can be used as a learning resource and learning materials for sustainability. Regarding the result, it was found out that the community-based Transdisciplinary learning management approach in social studies through Miang wisdom helped promote green citizenship of secondary school students in an overall picture at a high level.

Suggestions

Suggestions for implementation

1. Community-based transdisciplinary learning management should be used together with other subjects in schools in order to promote Professional Learning Community (PLC) whereby the content can be selected for adjustment. Another alternative is to implement the form of organizing activities in learning management to be in line with situations or the local context. This can help bring about students' common responsibilities towards the community.
2. Building cooperation with educational institutions in developing knowledge sets in the form of guidelines, methods and information medias in order to promulgate knowledge of the community. Moreover, Thai medias and foreign-language medias should be developed.
3. Memorandum of Understanding (MOU) should be prepared between the community and the university to be used as sources for learning management apprenticeship by using the community as a base of teaching professional externship students in developing medias and a learning source.

Suggestions for next research

1. Research regarding Community-based transdisciplinary learning management in other wisdom areas of different contexts should be conducted in order to compare skills of strong citizenship suitable in each context and to be used as guidelines for efficient Community-based transdisciplinary learning management later.
2. The study on learning innovation which inserts community stories and history, community way of life conforming to abundance of forests, Miang plantations and

planting coffee trees should be conducted to appreciate dependence and living together with ancient forests. This also includes balancing of everything which makes tourism become learning for keeping the ecosystem in community areas.

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