
Developing Teaching ASEAN Indigenous Wisdom with Handmade Material Innovation the Create Equitable Learning Ecosystems to Promote Global Citizenship of Students in Special Economic Zone, Northern Thailand

Charin Mangkhang (Corresponding Author)
Faculty of Education, Chiangmai University, Thailand
E-mail: charin.mangkhang@cmu.ac.th

Nitikorn Kaewpanya
Faculty of Education, Chiangmai University, Thailand

Nitpaporn Rujiwattanakul
Chiang Rai Municipality School 6, Thailand

Oatsawin Thipthep
Chiang Rai Municipality School 6, Thailand

Kuljira Nenbumrung
Chiang Rai Municipality School 6, Thailand

Teewasu Suktanatawepaisarn
Chiang Rai Municipality School 6, Thailand

Suhai Jaisang
Chiang Rai Municipality School 6, Thailand

Weerada Song
Chiang Rai Municipality School 6, Thailand

Received: 08/01/2025
Accepted: 14/03/2025
Published: 01/05/2025

Volume: 6 Issue: 3

How to cite this paper: Mangkhang, C., Kaewpanya, N., Rujiwattanakul, N., Thipthep, O., Nenbumrung, K., Suktanatawepaisarn, T. Jaisang, S., & Song, W. (2025). Developing Teaching ASEAN Indigenous Wisdom with Handmade Material Innovation the Create Equitable Learning Ecosystems to Promote Global Citizenship of Students in Special Economic Zone, Northern Thailand. *Journal of Practical Studies in Education*, 6(3), 10-20
DOI: <https://doi.org/10.46809/jpse.v6i3.100>

This work is licensed under the Creative Commons Attribution International License (CC BY 4.0).<http://creativecommons.org/licenses/by/4.0/>



Abstract

This research aimed to: 1) analyze the need for developing handmade media innovation to create an equitable learning ecosystem for promoting global citizenship among students in the Special Economic Zone of Northern Thailand; 2) develop teaching on ASEAN indigenous wisdom with handmade media innovation to create an equitable learning ecosystem for promoting global citizenship of students in the Special Economic Zone of Northern Thailand; and 3) evaluate the global citizenship of students in the Special Economic Zone of Northern Thailand. This study employed a Community Based Participatory Action Research (CBPAR) approach. The research sample consisted of: 1) 10 school administrators and teachers; 2) 9 experts in teaching media development and social studies instruction; and 3) 40 ethnic primary school students, for a total of 59 participants. The research instruments included: 1) an evaluation form for lesson plans and handmade media innovation that creates an equitable learning ecosystem; and 2) a global citizenship assessment form. 1. The analysis of the need for developing handmade media innovation to create an equitable learning ecosystem for promoting global citizenship among students in the Special Economic Zone of Northern Thailand found that Administrators, teachers, and students in peri-suburban schools in Chiang Rai province expressed a strong need for the development of handmade media innovation. This need stems from the schools being located in ethnic border communities where students primarily use the Iu Mien language. Developing handmade media in their native language facilitates learning, creates an equitable learning environment, and enhances students' learning and language skills. The community also suggested incorporating local indigenous knowledge and cultural practices into the content of the handmade media to foster cultural awareness among students. 2. The development of teaching on ASEAN indigenous wisdom with handmade media innovation to create an equitable learning ecosystem for promoting global citizenship of students in the Special Economic Zone of Northern Thailand. The research team has developed five trilingual handmade media innovations, incorporating English, Thai, and Iu Mien languages. The topics included: (1) Knowing Our Body; (2) Kitchen Utensils in My Home; (3) Delicious Local Fruits; (4) Safe-to-Eat Local Vegetables; and (5) Our Pets and Wild Animals. The CADDIE model by Mangkhang (2017) guided the design process. The evaluation results indicated that the media was accurate, high-quality, and appropriate. These materials were integrated with 5 lesson plans on the topic of "Community Environment," totaling 10 hours of instruction. The evaluation of the lesson plans also showed high levels of accuracy, quality, and appropriateness. 3. The evaluation of the global citizenship of students in the Special Economic Zone of Northern Thailand revealed that students exhibited the highest level of global citizenship.

Keywords: Handmade Media Innovation, Global Citizenship, Equitable Learning Ecology, Teaching Indigenous Wisdom of ASEAN, Students in Special Economic Zones

1. Introduction

The Incheon Declaration and Framework for Action (Education 2030) sets ambitious goals for global education, emphasizing inclusivity, equitable quality education, and lifelong learning. It recognizes the importance of effective policies, planning, and multi-sectoral collaboration for success. The Declaration urges governments to prioritize education funding, recommending an allocation of 4-6% of GDP or 15-20% of national budgets, depending on national contexts. As a signatory to the Incheon Declaration, Thailand is encouraged to establish a committee to monitor and evaluate educational progress. This will not only provide data for sharing with UNESCO member states but also contribute to a more systematic approach to education development, benefiting the country's education reform efforts. Following the official adoption of the goals in September 2015, UNESCO will develop an operational framework to support the achievement of the education targets by 2030. (Office of the Spokesperson, 2015; UNESCO et al., 2015; UNESCO, 2018)

From the concept of Goal 4 for Sustainable Development (SDGs), the idea of ensuring inclusive and equitable quality education and promoting lifelong learning opportunities for all, the goal of achievement encompasses quality education. To reinforce the proven belief that education is one of the most powerful drivers for sustainable development, one of the courses of action is to create and upgrade educational equipment and tools that are sensitive to children, people with disabilities, and gender, to have a safe, non-violent, inclusive and effective learning environment for all, to ensure that all learners acquire the knowledge and skills necessary to promote sustainable development, including education for sustainable development 1 and sustainable lifestyles through cultural diversity and the contribution of culture to sustainable development (United Nations, 2015). Education is essential for human beings because education is the beginning of many opportunities in life, which all sectors and all levels of society attach importance to education. For example, one of the Sustainable Development Goals (SDGs) for many countries set by the United Nations also focuses on education, namely, Goal 4 of Sustainable Development (SDGs 4) focuses on equitable education, eliminating inequality, by emphasizing ensuring inclusive and equitable quality education and promoting lifelong learning opportunities for all. For Thailand, the Independent Committee for Education Reform has clearly concluded that inequality is a major problem of the country, leading to the Ministry of Education's work strategy in line with Strategy 4 of the 20-Year National Strategy on creating opportunities and equality in society, with the goal of reducing inequality and creating justice in society, which is based on the important principle and basis of creating a quality society where all members of society can access social welfare systems in various forms, along with creating fair opportunities without discrimination (Ramingwong, 2023)

The No Child Left Behind Act (NCLB) of 2001 in the United States marked a significant effort to improve student achievement and reform primary and secondary education programs. A key goal of NCLB was the mandate that within a decade, all students, including those with disabilities, would have a fair, equal, and significant opportunity to receive a high-quality education and achieve proficiency in challenging state academic standards. This was to be measured through state academic assessments. NCLB stands as one of the most significant education initiatives enacted in recent decades. Central to this initiative were the requirements that all students have access to qualified teachers and the opportunity to attend high-quality schools. The NCLB legislation also mandated that states raise academic achievement for all students, including those with disabilities (Simpson, Lacava, & Graner, 2004; Mangkhang, C., et al, 2022). This research paper explores the evolution and impact of initiatives aimed at achieving educational equity across the globe.

According to the National Education Act of B.E. 2542 (amended in 2545), the aim of education in Thailand is to develop Thai people to be complete human beings in all aspects: physically, mentally, intellectually, and morally. This act ensures the right to access at least 12 years of basic education, which the state must provide with quality and free of charge. As a result, the Ministry of Education established the Basic Education Core Curriculum B.E. 2551, with the goal of developing well-rounded individuals who are knowledgeable, virtuous, and happy. This curriculum aims to equip learners with the potential for further education and successful careers. It outlines learning standards that foster 8 desirable characteristics and 12 fundamental Thai values to cultivate well-rounded individuals in both physical and mental aspects. The Basic Education Core Curriculum designates Social Studies, Religion, and Culture as a core subject from primary to upper secondary levels (grades 1-12). This subject serves as a tool to facilitate learners' development in three key areas: knowledge, skills, and attitudes. Its objectives are to nurture learners into responsible Thai and global citizens, equipping them with essential competencies, desirable characteristics, and the knowledge to contribute as good citizens. To ensure quality, education must cater to all learners, including those with special needs such as visual or hearing impairments (Mangkhang, 2560; Ministry of Education, 2007). Furthermore, a crucial goal of education is to reduce social inequality and provide everyone with access to basic education and age-appropriate learning resources, enabling them to receive a good education and become happy and productive citizens.

Poverty has driven approximately 500,000 Thai children out of the education system, and another 2 million are at risk of missing out on quality education. Among them are children with special needs who require extra care and support. A significant contributing factor to this problem is the high cost of education that families must bear, which is disproportionately higher for low-income families compared to their wealthier counterparts. Research indicates that low-income families face education costs four times greater than those of affluent families. This financial burden highlights the inadequacy of current resource allocation strategies aimed at reducing educational inequality. For instance, students from different socioeconomic backgrounds often receive the same amount of financial aid, regardless of their varying needs. This approach contrasts with the principle of equity, which advocates for resource allocation based on individual needs and circumstances. The disparity in educational outcomes is further exacerbated by differences in school quality and standards, teacher effectiveness, and socioeconomic backgrounds (Fund for Educational Equality, 2019). The lack of adequate resources to support learning, particularly for children with special needs, is another critical issue pushing students out of the education system.

The ethnic diversity within northern Thai classrooms includes the presence of the Iu Mien, or Yao, people, who reside across nine provinces, 44 districts, and 195 villages, encompassing approximately 9,501 households and a total population exceeding 50,000. These communities are concentrated in the provinces of Chiang Rai, Phayao, and Nan, with additional populations in Kamphaeng Phet, Chiang Mai, Tak, Phetchabun, Lampang, and Sukhothai. Furthermore, Mien populations are also found in northern Vietnam, northern Laos, and eastern Myanmar in the Kengtung State region. The preservation of the Iu Mien language, with its distinct ethnic identity, and the continued learning of Iu Mien culture, which involves tracing roots and history, are crucial components in promoting the Iu Mien identity. Additionally, the Iu Mien language is spoken by approximately 880,000 people in China, and there is a significant diaspora of over 30,000 Iu Mien individuals in the United States, Canada, and Europe. (Burutphat, 1995; Institute for Hill Area Research and Development, Department of Public Welfare, 1998; Leeprecha, Trakarntamrong, & Leksomboon, 2004; Chirakitni, 2022). The Ban Pha Lang community, located in Huai Chomphu sub-district, Chiang Rai province, Thailand, is situated in a peri-suburban area at an altitude of 1,000-1,200 meters above sea level. This geography is conducive to cultivating high-quality Arabica coffee, for which the region is widely recognized (Sriwat, 2021). The community is comprised of Iu Mien people who have preserved their unique culture and language to this day. Consequently, children in the community primarily use the Iu Mien language for communication. However, the use of Iu Mien poses a significant obstacle to students' learning. Thailand's education system utilizes Thai as the medium of instruction. Our research indicates that schools in Ban Pha Lang face challenges in managing the learning process because most students communicate in Iu Mien, while classroom instruction remains primarily in Thai. This language barrier leads to difficulties in comprehending content and a disconnect between classroom knowledge and the community's cultural context. These issues may hinder academic progress, reduce educational opportunities, and contribute to long-term inequality.

This research article explores the challenges faced by ethnic minority students in the current educational system and highlights the importance of culturally relevant teaching materials in improving their academic performance. Studies have shown that these students often underperform due to language barriers and a lack of understanding of the content taught, as the curriculum and teaching materials are primarily in the national language, which is unfamiliar to them. This can lead to stress, demotivation, and poor academic performance (Premsrirat, 2050). The current education system does not adequately cater to the needs of ethnic minorities, as the curriculum and teaching materials are not designed to be inclusive. Therefore, it is crucial to provide these students with the right to learn using materials that are relevant to their languages and cultures (Sertthabut,

2012). Learning from culturally relevant materials can enhance their learning effectiveness, promote real-life learning, and foster a sense of local and global citizenship.

Global citizenship is the social, political, environmental, and economic actions of individuals and communities that have global implications. It is the belief that individuals are members of diverse networks, both local and non-local. Promoting global citizenship in sustainable development will help individuals feel responsible for their society to act for the benefit of all societies, not just their own (United Nations, 2023). Students who recognize that individual identity extends beyond geographical or political boundaries, and accept citizens from other regions with understanding, have the correct concepts and attitudes regarding the coexistence of humanity in terms of relationships and interdependence. They have a responsibility for their own human rights and have an understanding of and respect for the humanity of others, and live a balanced life.

Therefore, the research team is interested in studying the development of innovative handmade media that create an equitable learning ecosystem to support the teaching of ASEAN local wisdom for promoting global citizenship among students in the Special Economic Zone of Northern Thailand. This will be an important guideline for developing the teaching of ethnic local wisdom in border schools with cultural diversity. It will also address the transformation of the learning ecosystem for learners with cultural backgrounds that pose learning obstacles, enabling them to access learning rights flexibly and seamlessly. This educational approach aims to provide learners with educational opportunities in line with the goals of sustainable educational development.

2. Methodology

2.1. Research Design

This study employs a Community-Based Participatory Action Research (CBPAR) approach. CBPAR emphasizes collaborative engagement between researchers and community members throughout the research process, from identifying research priorities to implementing interventions and analyzing results. This approach aims to empower communities to address issues they deem important and generate knowledge that is both relevant and applicable to their context.

2.2. Population and Sample

The population of this research consists of School administrators and teachers, experts in instructional media development and social studies education, elementary school students from ethnic minority groups

Moreover, the samples in this research are: ten administrators and teachers, selected using purposive sampling, nine experts in teaching media development and social studies instruction, selected using purposive sampling, forty ethnic elementary students who are suitable for learning through handmade media, selected using simple random sampling.

2.3. Research Instruments

The research instruments consist of:

1. Unstructured interview on the needs for developing innovative handmade media that create an equal learning ecosystem to promote global citizenship of students in the northern Special Economic Zone of Thailand.
2. Evaluation form for the quality of indigenous handmade teaching media.
3. Evaluation form for the quality of lesson plans.
4. Global citizenship assessment form.

2.4. Data Collection

1. Documentary Study: Collecting data from documents, books, and journals, both theoretical and conceptual, to be used in analyzing the research topic.
2. Situational Analysis: Qualitative data collection by interviewing administrators, teachers, and the community about the need to develop indigenous handmade teaching media to promote global citizenship of students in the Special Economic Zone.
3. Design and Development: Quantitative data collection by designing and developing indigenous handmade teaching media and lesson plans. Checking the quality and appropriateness of the developed indigenous handmade teaching media through expert validation using the evaluation form for the quality of indigenous handmade teaching media and the evaluation form for the quality of lesson plans.
4. Evaluation of the use of indigenous handmade teaching media: Quantitative data collection by piloting the teaching media with the lesson plans and assessing the global citizenship of ethnic students using the global citizenship assessment form.

2.5. Data Analysis

Qualitative Data: The research team analyzed the data according to the study objectives using the data reduction method to reduce the amount and size of raw data obtained from the interviews. Then, data extraction was used to obtain usable information for the study and summarize the main points according to data groups and the results of the data relationship analysis.

Quantitative Data: The research team analyzed the data obtained from the assessment forms using statistical software suitable for data analysis. The analysis was conducted using descriptive statistics, with the results presented as mean and standard deviation.



3. Results




In this research, the research team has classified the data obtained from the research and presented the research results according to the objectives set. The results of the study can be summarized as follows:

The analysis of the need for developing handmade media innovation to create an equitable learning ecosystem for promoting global citizenship among students in the Special Economic Zone of Northern Thailand. It was found that the administrators, teachers, and students of Ban Pa Lang School, Chiang Rai Province, have a strong need to develop ethnic handmade teaching materials. This is because the school is located in the Iu Mien ethnic community where students primarily use their mother tongue for communication. Developing teaching materials that use the mother tongue as a medium of learning will help enhance students' learning and language skills. In addition to using the mother tongue as a medium of learning, the Ban Pa Lang community also has an important suggestion: to use local knowledge, wisdom, and the environment as the main content in the development of teaching materials. Examples include household utensils and local plants, which are the local wisdom of the Iu Mien people. This will allow students to learn, understand, and inherit their valuable culture, leading to the sustainable development of the community.

The development of teaching on ASEAN indigenous wisdom with handmade media innovation to create an equitable learning ecosystem for promoting global citizenship of students in the Special Economic Zone of Northern Thailand. It was found that the research team designed ethnic handmade teaching materials using local culture and the environment. The materials were produced in 3 languages, consisting of English, Thai, and Iu Mien, with a total of 5 topics: (1) Knowing our body, (2) Kitchen utensils in my house, (3) Delicious local fruits, (4) Safe-to-eat local vegetables, and (5) Pets and wild animals in our homes. The design was based on the CADDIE model by Mangkhang, et al. (2017), with details as follows:

Table 1. Details of the Handmade Indigenous Ethnic Teaching Media Model

No.	Handmade media innovations that create an equitable learning ecosystem.	Innovative teaching approaches using handmade media
1		<p>Category: Getting to Know Our Body</p> <p>Teaching method: The instructor may use songs about the body to accompany the teaching of this category to make learning enjoyable. The instructor will first teach vocabulary in 3 languages, starting with the primary language, Iu Mien, followed by Thai and English as the international language. Then, learners will match pictures with the correct vocabulary and pronounce those words to the instructor and classmates in all 3 languages according to the vocabulary they have received.</p>
2		<p>Category: My Home Kitchenware</p> <p>Methodology: The instructor simulates a kitchen scenario, demonstrating the use of various kitchen tools and utensils. Prior to the demonstration, learners are introduced to key vocabulary terms in three languages:</p> <ol style="list-style-type: none"> 1. Primary language: The learner's native language (assumed to be Iu Mien in this context). 2. Thai: The national language of Thailand. 3. English: As a global language. <p>Learners then engage in a matching activity, pairing images of kitchenware with corresponding vocabulary terms. Each learner then presents their matched pairs to the class, reading aloud the terms in all three languages.</p>

No.	Handmade media innovations that create an equitable learning ecosystem.	Innovative teaching approaches using handmade media
3		<p>Category: Delicious Local Fruits Media Transmission: Teachers can employ various methods, such as simulating a fruit-buying scenario with pre-assigned vocabulary. First, the teacher introduces vocabulary in 3 languages: the primary language, Iu Mien, followed by Thai and English as the international language. Then, students match pictures with corresponding words and pronounce them aloud in all 3 languages for the teacher and classmates.</p>
4		<p>Category: Safe-to-eat local vegetables Media Presentation: The teacher simulates a market situation with vendors and customers to make learning vocabulary in this category more engaging. Each student is given a basket and pictures with vocabulary words. They must match the pictures to the corresponding words on the front of the basket. First, the teacher introduces the vocabulary in three languages: the primary local language, Iu Mien language, followed by Thai and English. Then, students match the pictures with the correct words and pronounce them aloud to the teacher and classmates in all three languages.</p>
5		<p>Category: Pets and Wild Animals of Our Home Media Presentation: Teachers can simulate situations or sing songs to accompany the lesson, depending on the teacher's application. The teacher will first teach the students vocabulary in 3 languages, starting with the primary language, Iu Mien, followed by Thai and English as the international language. Then, students will match pictures with the correct vocabulary and pronounce those words to the teacher and classmates in all 3 languages according to the vocabulary they have received.</p>

The research team assessed the quality and suitability of handmade media for teaching ASEAN indigenous wisdom. The results of the assessment are shown in the following table.

Table 2. Results of the Evaluation of the Suitability of Handmade Media Innovation (N=9)

No.	Evaluation Criteria	\bar{x}	SD	Results
1	Media promoting local community learning that creates justice in the civic history of the nation.	4.89	0.33	Highest
2	Media promoting the development of local civic institutions that create social justice.	4.89	0.33	Highest
3	Media promoting the values of local citizens in conserving the environment of ethnic communities.	4.78	0.44	Highest
4	Media promoting the rights and participation of local citizens in democratic ways.	4.89	0.33	Highest
5	Media promoting the acceptance of diverse thinking of local citizens.	4.78	0.44	Highest
6	Media promoting creative exchange of local learning.	4.67	0.71	Highest
7	Media promoting the process of investigating local knowledge with critical thinking.	4.22	0.83	High
8	Media promoting self-worth of local citizens.	4.44	0.88	High
9	Media promoting self-reliant local community innovations.	4.33	0.87	High
10	Media promoting creative community entrepreneurship citizenship.	4.33	0.87	High
11	Media promoting sustainable community resource management networks.	4.67	0.50	Highest
12	Media promoting community environmental ethics and morality.	4.78	0.44	Highest
13	Media promoting the enhancement of local cultural experiences.	4.67	0.50	Highest
14	Media promoting learning of local wisdom that covers all ages.	4.56	0.73	Highest
15	Media promoting cross-cultural social interaction in communities.	4.56	0.73	Highest
16	Media promoting the development of digital local citizenship.	4.78	0.44	Highest
17	Media promoting local language culture in learning global citizenship.	4.89	0.33	Highest
18	Media promoting democratic competence of ethnic communities.	4.56	0.73	Highest
19	Media promoting skills to link local knowledge for peaceful coexistence.	4.67	0.71	Highest
20	Media promoting cooperation of local citizens in solving environmental problems.	4.89	0.33	Highest
Overall		4.66	0.57	Highest

Table 2 shows that the overall evaluation of the indigenous handmade teaching media is of the highest quality ($\bar{x}=4.66$, $SD=0.57$). When considering each item, the evaluation results are at the highest level for 5 items ($\bar{x}=4.89$): 1) The teaching media stimulates interest and curiosity in the subject matter. 2) The teaching media facilitates effective learning and helps learners retain what they have learned. 3) The teaching media aligns with the learning objectives. 4) The teaching media utilizes the learners' mother tongue to aid in their learning. 5) The teaching media can be appropriately applied in teaching and learning management.

This shows that the developed indigenous handmade teaching media is effective enough to be used in teaching and learning. The research team then designed the indigenous handmade teaching media to be used with the lesson plan on the topic of Community Environment, consisting of 5 learning management plans, as shown in the following table.

Table 3. Details of the Lesson Plan on the Topic of Community Environment

learning management plan	Summarization	About	Number of hours
Plan 1	The human body is a complex system, made up of various organs working together in an amazing way. Understanding the structure and function of these organs allows us to take care of our health properly, resulting in a good quality of life.	Getting to know our body / Our body	2hours
Plan2	Kitchenware reflects wisdom, culture, and lifestyle. It has evolved alongside society, demonstrating the creativity and adaptability of the Iu Mien people. It is essential for cooking, which promotes health and family relationships.	Kitchenware at my home / My kitchenware	2hours

learning management plan	Summarization	About	Number of hours
Plan3	Local fruits have a delicious taste, unique texture, and high nutritional value. They are also linked to the culture, traditions, and way of life of the Iu Mien people.	Delicious local fruits / Tasty local fruits	2hours
Plan4	Safe native vegetables are those that are grown locally in a natural way, free from chemical contamination. They have high nutritional value, help promote health and immunity, are a sustainable choice, and help conserve local plant genetic resources.	- Safe local vegetables / Safe local greens	2hours
Plan5	Animals are living beings with diverse forms, behaviors, and roles in the ecosystem. Animals are important to humans both in terms of food and economy. However, humans must be aware of animal welfare rights and work together to conserve animals to maintain the balance of nature.	Pets and wild animals of our home / Our pets and wild animals	2hours

The research team studied the Basic Education Core Curriculum B.E. 2551 by developing a lesson plan based on learning management approaches, theories, principles, concepts, relevant documents and research. The team studied the learning management approach according to the Basic Education Core Curriculum B.E. 2551 of the Office of the Basic Education Commission, Ministry of Education. The research team used the developed lesson plan to evaluate the quality of the lesson plan by experts. The results of the evaluation of the suitability of the lesson plan on the topic of "Community Environment" are shown in the following table.

Table 4. Results of the Evaluation of the Appropriateness of the Lesson Plan on the Topic of Environment in the Community (N=9)

No	Evaluation Criteria	\bar{x}	SD	Results
1	The lesson plan is consistent with the Basic Education Core Curriculum and the school curriculum.	4.78	0.44	Highest
2	The lesson plan is consistent with the nature of the subject.	4.67	0.71	Highest
3	The lesson plan is appropriate for the age of the learners.	4.78	0.44	Highest
4	The lesson plan is consistent with the situation of teaching and learning management in multicultural classrooms.	4.78	0.67	Highest
5	The lesson plan is appropriate for the process of developing learners to become global citizens.	4.89	0.33	Highest
6	The lesson plan has appropriate learning content that is linked to the community.	4.67	0.71	Highest
7	The lesson plan promotes the creation of social studies concepts for learners.	4.89	0.33	Highest
8	The lesson plan has flexibility in language and culture in teaching ethnic students.	4.67	0.71	Highest
9	The lesson plan is appropriate for the learning of ethnic students.	4.89	0.33	Highest
10	The lesson plan is appropriate and can be used in classroom teaching.	4.67	0.71	Highest
Overall		4.77	0.54	Highest

The evaluation of the global citizenship of students in the Special Economic Zone of Northern Thailand found that the research team created a global citizenship assessment by having teachers assess students. The students have the following levels of global citizenship, as shown in the table below.

Table 5. Results of the Evaluation of the Level of Global Citizenship of Ethnic Students (N = 40)

No.	Evaluation Criteria	\bar{x}	SD	Results
1	Learners are interested in the cultures of nearby communities and those of their classmates.	4.60	0.55	Highest
2	Learners believe that studying the history of other ethnic groups is very important for learning in a multicultural society.	4.20	0.45	High

No.	Evaluation Criteria	\bar{x}	SD	Results
3	Learners are interested in the diversity of race, culture, beliefs, and environments in other regions of the world.	5.00	0.00	Highest
4	Learners realize that our world thrives on interdependence.	5.00	0.00	Highest
5	Learners understand that they should use intelligence to manage problems in everyday life.	4.20	0.45	High
6	Learners can work collaboratively with others to complete assigned learning tasks effectively.	4.20	0.45	High
7	Learners have an awareness of and care for the environment around them.	4.40	0.55	High
8	Learners prioritize the common good and accept the rules and regulations of the classroom.	4.40	0.55	High
9	Learners know how to seek out and use sources of knowledge around them.	4.60	0.55	Highest
10	Learners know how to help each other.	5.00	0.00	Highest
11	Learners have a good life with their classmates and interact well with friends and teachers.	4.40	0.55	High
12	Learners have knowledge and understanding of the changes that occur around them.	5.00	0.00	Highest
13	Learners accept the differences in the temperament, religion, and race of their classmates.	4.60	0.55	Highest
14	Learners have love and unity with their classmates.	5.00	0.00	Highest
15	Learners are honest with themselves and their classmates.	4.50	0.00	Highest
Overall		4.61	0.31	Highest

Table 5 shows that the overall assessment of global citizenship among ethnic students is at the highest level ($\bar{x}=4.61$, $SD=0.31$). A detailed examination reveals that there are 5 assessment items with the highest level of evaluation ($\bar{x}=5.00$): 1) Learners are interested in the diversity of race, culture, beliefs, and environments in other regions of the world. 2) Learners realize that our world thrives on interdependence. 3) Learners are helpful to each other. 4) Learners have an understanding of the changes happening around them. 5) Learners have love and unity with their classmates. This shows that ethnic handmade teaching media effectively promote global citizenship among ethnic students.

4. Discussion

The analysis of the need for developing handmade media innovation to create an equitable learning ecosystem for promoting global citizenship among students in the Special Economic Zone of Northern Thailand found that administrators, teachers, and students at Ban Pa Lang School in Chiang Rai Province have a strong need for the development of ethnic, handcrafted teaching materials. This is because the school is located in an Iu Mien ethnic community where students primarily use their mother tongue for communication. Developing teaching materials that use the mother tongue as a medium of learning will help improve students' learning and language skills. In addition, the community has proposed that the environment and local knowledge be used as the main content in the development of teaching materials to enable students to learn about the wisdom and culture of their own communities. This is consistent with Premrirat (2007), who states that ethnic minority children have lower than standard academic achievement due to problems with communication and understanding the content taught by teachers. This is because the content or textbooks used in teaching are still in the official language, which the children are just learning and which is not consistent with their familiar way of life. This causes children to feel stressed, not want to learn, and leads to poor academic performance. This is in line with the research of Yotsungrojn & Channuan (2017), which suggests that teaching materials have the greatest impact on the academic achievement of students in Border Patrol Police Schools. Similarly, teachers need to be open to teaching methods that emphasize multiculturalism.

The development of teaching on ASEAN indigenous wisdom with handmade media innovation to create an equitable learning ecosystem for promoting global citizenship of students in the Special Economic Zone of Northern Thailand. It was found that the research team designed indigenous handmade teaching materials using local culture and community environment. These materials were produced in 3 languages: English, Thai, and Iu Mien, covering 5 topics: (1) Household items, (2) Our bodies, (3) Local fruits, (4) Local vegetables, and (5) Pets and wild animals. The design was based on the CADDIE model by Mangkhang et al. (2017). The evaluation results showed that the materials were complete, accurate, and of very high quality. These materials were used in conjunction with 5 lesson plans on the topic of "Community Environment," totaling 10 hours. The evaluation of the lesson plans also indicated high levels of completeness, accuracy, and appropriateness. This aligns with the concept of Mangkhang et al. (2015), which suggests that education for local empowerment must meet learners' needs and empower them to appreciate and understand community culture and local identity, enabling them to design their own learning independently. This also corresponds with Thadtong's (2007) work, which states that local contexts in Thai society vary, and each locality possesses knowledge relevant to its own problems and needs. This knowledge, such as arts,

culture, traditions, and local occupations, can be utilized effectively. Because it contains content necessary and relevant to the lives of people in those communities, it can be developed into a local curriculum to enable learners to become complete members of the community and meet learning standards. It also aligns with the shared goals of educational institutions and national curriculum policies. The creation of a local curriculum for schools can be done by involving various parties, including schools, parents, local scholars, and community businesses, in the development process. This ensures diverse information, opinions, and perspectives, covering important topics that local learners should know and addressing the actual problems and needs of the locality. Furthermore, it is consistent with the idea of Dewi (2018), who proposes that learning innovation is at the heart of education and requires consideration. Learning activities involve changing concepts and values, and integrated learning media are linked to future needs, which are not only about competitiveness but also about technological advancements and information. The quality of the developed learning system should be able to quickly address any weaknesses.

The evaluation of the global citizenship of students in the Special Economic Zone of Northern Thailand found that the students have a very high level of global citizenship. This is consistent with the concept of Visaphrom (2019), who stated that civic education is the foundation of stable governance. Civic education is not only about enhancing people's knowledge and not just for the sake of the political system, but it also has a direct and tangible impact on people. It transforms them into active citizens and enables them to coexist respectfully within the rules of society. Furthermore, the practice of democracy, where the highest power belongs to the people, requires training the citizens, the owners of the country, to be able to govern themselves and live together amidst differences and conflicts. This learning and training to develop the ability to govern in a democratic system is what is called civic education. This aligns with Sripahol (2008), who proposed that global citizenship is a characteristic of individuals who understand and accept citizens from other regions, view the world from different perspectives with understanding, and have correct concepts and attitudes about the coexistence of humanity in terms of relationships and interdependence. They accept and can work effectively with others in terms of cooperation and communication, and are willing to resolve conflicts peacefully at the local, national, and global levels. It is also consistent with Oxfam (2006), which proposed that individuals with global citizenship are those who are aware and understand the wider world and have a strong role in their communities. They can work with others to make the world more just, equitable, and sustainable. Therefore, it is necessary to encourage young people to develop the knowledge, skills, and values necessary for engaging with the world, with the belief that we can all make a positive difference.

5. Conclusion

Developing the teaching of ASEAN indigenous wisdom through handcrafted media innovation that creates an equitable learning ecosystem to promote global citizenship among students in the Special Economic Zones of Northern Thailand. This is a neo-pedagogy under the concept of regenerative education through the design of social studies learning materials in 3 languages, using the mother tongue (Iu Mien) as a link to knowledge, along with developing second and third language skills of students. With the important goal of creating equality and equity in education, building knowledge and life skills is essential to creating sustainable citizens in society.

6. Recommendations

6.1. Suggestions from research

When utilizing handcrafted media in teaching, instructors should establish a clear agreement between learners and themselves before use. This ensures the learning materials are used with maximum effectiveness.

Handcrafted learning materials offer the flexibility to adapt content to suit the local context, such as incorporating traditions, culture, and various resources within the community.

It is recommended to develop an online course on creating handcrafted learning materials specifically for ethnic minority learners. This would enable student teachers to access learning resources and create teaching aids suitable for use in schools.

6.2. Suggestions for Future Research

Further research should be conducted on the effects of using ethnic handmade teaching media with students in other contexts.

An online manual for producing ethnic handmade teaching media should be developed for schools that need a model for developing teaching media for other ethnic groups.

An online course on producing ethnic handmade teaching media should be developed for teachers at all levels of education to create guidelines for equitable and equal education.

Teacher training institutions should integrate the development of indigenous wisdom handmade material innovation into their curriculum for pre-service teacher education within Thailand's Kru Rak Thin project.

To enhance the instructional capacity of social studies teachers across the nation, strategic workshops focused on the development of indigenous wisdom-based handmade educational innovations are strongly advocated.

References

Burutphat, K. (1995). *Chao khao [Hill tribes]*. Bangkok: Prae Pittaya.

- Chirakitni, N. (2022). Mien ethnic group government through consensus, beliefs, society, and culture. *Journal of MCU Peace Studies*, 10(2), 858-870.
- Dewi, R. E. (2018). The Effect of Learning Strategies, Learning Models, and Learning Innovation on Educators' Performance and Education Quality in Senior High Schools in Makassar. *TEM Journal*, 7(3), 548-555.
- Equitable Education Fund. (2019). *Educational inequality can be alleviated by equality*. Retrieved June 23, 2024, from <https://www.eef.or.th/about/>
- Institute for Hill Area Research and Development, Department of Public Welfare. (1998). *Hill tribes [Hill tribes]*. Chiang Mai: Nantakan Graphic.
- Leeprecha, P., Trakarntamrong, Y., & Leksomboon, W., (2004). *Mian: Diverse lives from mountains to cities*. Chiang Mai: Social Research Institute, Thailand.
- Mangkhang, C. (2016). *Ideology: Social studies curriculum for the people* (1st ed.). Bangkok: Chulalongkorn University Press.
- Mangkhang, C., et al. (2015). *The development of a local curriculum through the cultural museum of the ethnic community of Ban Phadarn, Takas Nuea Subdistrict, Mae Tha District, Lamphun Province* [Research report]. Chiang Mai: Faculty of Education, Chiang Mai University.
- Mangkhang, C., et al. (2017). *The King's Science: A Creative Social Studies Learning through Mien Culture to Promote Green Citizenship in Different Contexts in Northern Thailand*. Chiang Mai: Faculty of Education, Chiang Mai University.
- Mangkhang, C., et al. (2022). Developing Handmade Teaching Material Innovation on Thailand Maps to Enhance Geography Concepts of Students with Visual Impairments to Creating an Equitable Ecology in Education for Sustainable Development. *Journal of Curriculum and Teaching*, 11(8), 159-172.
- Ministry of Education. (2008). *Core Curriculum for Basic Education B.E. 2551 (A.D. 2008)*. Bangkok: Agricultural Cooperative Federation of Thailand Printing House.
- National Education Act, B.E. 2542 (1999) (Amended B.E. 2545 (2002)). (2002, December 19). *Royal Thai Government Gazette*, 119(123a), 16–21.
- Office of the Spokesperson. (2015). *World Education Forum in Incheon, Republic of Korea: Summary of participation in the World Education Forum*. Bangkok: Bureau of International Cooperation, MOE.
- Oxfam GB, (2006). *Education for Global Citizenship: A Guide for Schools*. Oxford: OxfamDevelopment Education.
- Premsrirat, S. (2007). *The use of local language and Thai as media of instruction: A case study of bilingual education (Thai-Malay) in schools in the four southern border provinces of Thailand*. (Research report). Office of the Research Fund (TRF).
- Ramingwong, P. (2023). A study of ethnic identity in the context of illiteracy among students in border patrol police schools in northern Thailand. *Payap University Journal*, 31(1), 96–110.
- Sertthabut, P. (2012). *The use of Pwo Karen wisdom to create teaching materials for kindergarten level* (Master's thesis). Chiang Mai: Maejo University.
- Simpson, L.R., Lacava, G.P., & Graner, S.P. (2004). The No Child Left Behind Act: Challenges and Implications for Educators. *INTERVENTION IN SCHOOL AND CLINI*, 2(40), 67-75.
- Sripahol, S. (2008). *The development of distance training package on classroom management to enhance global citizenship for social studies*. Nonthaburi: Sukhothai Thammathirat University.
- Sriwat, K. (2021). *Cafe Amazon Drip Coffee Pha lung: Drip bag coffee that wants to improve the quality of life of farmers through good quality coffee that is convenient to carry around*. Retrieved June 23, 2024, from <https://adaymagazine.com/cafe-amazon-drip-coffee/>
- Thadtong, K. (2007). *Development of Local Curriculum*. Bangkok: Kasame Printing.
- UNESCO et al. (2015). Education 2030 Incheon Declaration and Framework for Action Towards Inclusive and equitable quality education and lifelong learning for all (Final for adoption). Paris: UNESCO.
- UNESCO. (2018). *Global Education Monitoring Report Summary 2019: Migration, Displacement and Education – Building Bridges, not Walls*. Paris: UNESCO.
- United Nations. (2015). *Transforming our world: The 2030 agenda for sustainable development*. Retrieved June 23, 2024, from <https://sdgs.un.org/2030agenda>
- United Nations. (2023). *Global Citizenship*. Retrieved June 23, 2024, from <https://www.un.org/en/academic-impact/global-citizenship>
- Visaphrom, S. (2019). Citizen building analysis to strengthen grassroots democracy: A case study of schools under Mahasarakham Municipality. *Journal of Political Science and Public Administration*, 9(3), 1-23.
- Yotsungrojn, W., & Channuan, N. (2017). Factors affecting the quality of students in the border patrol police schools under the Border Patrol Police Bureau 33. *Pikanesuan Journal*, 13(1), 97-115.