

## *The Development of a Local Curriculum on Bamboo Wicker for Primary Students*

Wanida Sarati, Muban Chom Bueng Rajabhat University, Thailand

The Asian Conference on Education & International Development 2023  
Official Conference Proceedings

### **Abstract**

The purpose of this study was to develop a local curriculum on bamboo wicker for grade 6 students at Klumnakkhawying 2 school (Ban Bowee). The sample consisted of 20 grade 6 students at Klumnakkhawying 2 school (Ban Bowee). The research instruments consisted of 1) curriculum conformity assessment form, 2) knowledge test about bamboo and bamboo wicker for students, 3) bamboo wicker making skill form for students, 4) opinion questionnaire for the curriculum, and 5) attitude measurement form for bamboo wicker for students. The statistics used for data analysis were mean ( $\bar{x}$ ), standard deviation (S.D.), t-test, and content analysis. The findings found that curriculum consists of importance/background, objective, principle, content, structure and learning time, learning activity, learning material/ learning resource, measurement and evaluation, the expected benefit, and lesson plan. The quality of the curriculum found that the consistency index was 0.81. The results of the curriculum trial showed that the scores on bamboo knowledge, bamboo wicker, bamboo wicker skills, and attitude towards bamboo wicker after using the curriculum were significantly higher than before using that at level 0.05. In addition, opinions towards local courses on bamboo wicker of students, the average was at a high level.

Keywords: Curriculum Development, Local Curriculum, Bamboo Wicker

**iafor**

The International Academic Forum  
[www.iafor.org](http://www.iafor.org)

## Introduction

From the characteristics of Thai society, the occupation of the majority of the Thai population is still agriculture. This profession is a traditional occupation of Thai people and is also a profession that can generate a lot of income for the country. Agriculture is a career that generates income within the country and income from exports. Farmer's occupation shows the importance of agriculture in Thai society, the characteristics of Thai society is an agricultural society that lives in a way that depends on each other and depends on the environment. These things have forged the minds of people in society to love freedom, love locality, have a gentle heart, generous, support each other, and live by relying on local resources to generate income.

Educational curriculum development and local curriculum development are extremely important because the curriculum is like the rudder of a ship that is an important part that will lead the ship to its destination safely. This is the same approach as using the curriculum as a guideline for learning management in order to achieve the educational objectives of the country. Therefore, curriculum is very important to be a framework or guideline for teaching education management to develop people with knowledge, skills, abilities and behaviors. That will benefit the development of society as a whole (Chaiwat Suthirat, 2013). Instructors, as the curriculum guides into the classroom, should study and understand their school curriculum in order to apply it properly. In line with Carl's concept (Carl, 2009), teachers should not only have expert knowledge of the subject they teach, but should also have knowledge of the nature and direction of the curriculum. The nature or direction of the curriculum will also indicate the nature or direction of the content that the instructor must teach as well.

A local curriculum is a curriculum developed from the study of the environment, community, society, culture, resource, demographics, and local interests. A local curriculum is a learning experience for learners in a particular locality. Consideration must be given to compatibility with the local environment and context. This is to meet the needs of the students, able to solve problems that arise with students and localities as well. The curriculum development process must be consistent with the intent of the National Education Act B.E. 2542, and its amendment (2nd edition) B.E. 2545 that focuses on the decentralization of education to localities. In addition, educational institutions will play a role and participate in curriculum development in accordance with local conditions and needs. It is considered decentralized and allows all local sectors to participate in curriculum development. However, today's social conditions are changing rapidly in every aspect that directly affect the views and lives of Thai people in both urban and rural areas (Prawet Wasi, 2018).

Klumnakhawying 2 school (Ban Bowee) is under the Office of Ratchaburi Primary Educational Service Area, Region 1, located in Suan Phueng District, Ratchaburi Province. The area is mountainous, arid, hot, and waterless. Thus it is very restrictive in cultivation. People in the community are less educated, therefore lacking the opportunity to earn income. Therefore, there should be various developments to improve the quality of life of the people in this community. Bamboo is an important plant and resource of this locality. It grows well in such areas. Mature bamboos have large trunks, thick wood and are used for construction due to their durability and strength. For example, it is used to build a residence, fence line, bridge construction and make scaffolding. Other parts are used to make wicker, musical instruments, handicrafts and food etc. Bamboo species that are suitable for being used as raw materials for creating products for sale is Pai Tong. It is commonly used as a structure that

requires strength, such as a carriage (Sukanya Chaiyaphong, 2020). Local children and young people are familiar with and have seen the use of bamboo for wicker in household and as a community product. Therefore, it should instill in local children and youth to use their local resources and wisdom. Wicker is one of the handicrafts that human beings create to use as tools and utensils in daily life. In addition, it is local wisdom, skills and expertise handed down from the ancestors. Locally available natural materials can create job, generate income, and add value to natural materials as well. It also allows people in the community to use their free time to benefit and can create an economy for the community to have better lives (Tawatchai Tienprateep, 2018). It is not just only Thai people use bamboo wicker, Sun and Liu (Sun & Liu, 2022) also mention bamboo wicker that Chinese, Japanese and many other countries in East Asia use it. In the south, it is popular to use wicker from bamboo. Therefore, it is very appropriate that children and young people should study to create wicker from their own local resources. Klumnakkhawying 2 school (Ban Bowee) has created a curriculum for educational institution in the occupational subject group with the objective of providing learners with knowledge, understanding, and basic skill, necessary for living by being aware of the changes in society. This course was created to allow students to apply knowledge about life and career to work creatively, to be a guideline for a career, to love work, to have a good attitude towards work, and can live in society with self-sufficiency and happiness. Although, there are vocational courses, there is still a lack of local curriculum on bamboo wicker that is concrete and can be used in everyday life. This can lead to children and young people not appreciating their local resources, and a lack of ways to pursue a career that does not require high investments.

For such an important reason and necessity, the researcher developed a local curriculum on bamboo wicker for grade 6 students, Klumnakkhawying 2 school (Ban Bowee) to develop knowledge, skills and occupational attitudes of local children and youth as well as guide teachers in organizing learning activities for students by using available resources to the greatest benefit. Moreover, the purpose is to show the importance and value of their local resources and wisdom that should be preserved and passed down to the next generation. These young people can transfer their knowledge and skills to other people or locality with similar local resource.

## **Method**

### ***Research design***

This research is the kind of research and development. The steps are as follow.

Step 1 Research: Study basic information

Step 2 Development: Develop curriculum

Step 3 Research: Trial curriculum

Step 4 Development: Evaluate and improve curriculum

### ***Participants***

Study basic information: Study basic problem and need of 20 students, opinion of 10 community members, opinion of 7 educational supervisors, and learning management conditions of 12 school personnel.

Develop curriculum: Assess curriculum consistency by 5 experts

Trial curriculum: Trial curriculum with 20 students

Evaluate and improve curriculum

### ***Data collection tools***

Curriculum conformity assessment form  
Knowledge test about bamboo and bamboo wicker for students  
Bamboo wicker making skill form for students  
Opinion questionnaire for the curriculum  
Attitude measurement form for bamboo wicker for students

### ***Data analysis***

The statistics used for data analysis were mean ( $\bar{x}$ ), standard deviation (S.D.), t-test, and content analysis.

### ***Research process***

Study basic information; curriculum development theory, local curriculum framework, basic problem and need of students, opinion from community members, opinion from educational supervisors, and learning management conditions of school personnel.

Develop a curriculum by presenting a draft curriculum to five experts to assess curriculum consistency. Then create and find out the quality of research tools.

Test about bamboo wicker and test attitude towards bamboo wicker before class. After that, record the score.

Trial course by managing the learning for students until completing 6 units.

Unit 1 General knowledge about bamboo and bamboo wicker, 2 hours

Unit 2 Chalom (round basket) weaving from bamboo, 3 hours

Unit 3 Fan weaving from bamboo, 3 hours

Unit 4 Kradong (bamboo tray) weaving from bamboo for fish drying, 4 hours

Unit 5 Kheng (basket with 2 handles) weaving from bamboo, 4 hours

Unit 6 Cradle weaving from bamboo, 4 hours

Then test the students' bamboo wicker skills.

Test about bamboo wicker and attitude towards bamboo wicker after class and ask for opinions on the course. Then record the score.

Improve the course.

### ***Teaching environment***

Organize learning activities with local participation by bringing a local sage who specializes in bamboo wicker work for more than 40 years as a speaker. Use bamboo as the main raw material that is easily available and common locally. Organize learning activities based on group processes and safety in the use of tools.

### **Research Results**

The findings found that curriculum consists of importance/background, objective, principle, content, structure and learning time, learning activities, learning materials / learning resources, measurement and evaluation, the expected benefit, include lesson plan. The quality of the curriculum found that the consistency index was 0.81.

The result of the assessment of students' knowledge about bamboo and bamboo wicker by using the bamboo and bamboo wicker knowledge test for 20 students, there are 12 items, 12 points, it was found that the pre-course scores has the mean ( $\bar{x}$ ) was 5.85, the standard

deviation (S.D.) was 2.02. After using the course, the mean ( $\bar{x}$ ) was 9.50, the standard deviation (S.D.) was 3.00. The evaluation result after using the curriculum was higher than before using the curriculum at statistical significance at the level .05, which was consistent with the research hypothesis.

The evaluation result of bamboo wicker making skills using the bamboo wicker making skill test of 20 students, 10 items, 50 points, it found that the pre-course scores, mean ( $\bar{x}$ ) was 10.66, standard deviation (S.D.) was 4.77. After using the curriculum, the mean ( $\bar{x}$ ) was 40.53, and the standard deviation (S.D.) was 3.50. The assessment results after using the curriculum were significantly higher than before using the curriculum at the .05 level, which was consistent with the research hypothesis.

The results of the assessment of students' attitude towards bamboo wicker by using the measure of attitude toward bamboo wicker of 20 students, a total of 10 items, which is a 5-point scale, found that the mean ( $\bar{x}$ ) score before using the curriculum was 3.91 points with a standard deviation (S.D.) 0.23. After using the curriculum, the mean ( $\bar{x}$ ) was 4.51, deviation (S.D) was 0.20. The assessment results after using the curriculum were higher than before using the curriculum at a statistically significant level of .05 which is consistent with the research hypothesis.

The results of the evaluation of students' opinions toward the local curriculum about bamboo wicker using questionnaire for opinion towards the local curriculum of 20 students, which is a scale of 5 levels, divided into 3 measurements; the subject of learning, the management of learning activities, and benefits received, total of 15 items, it found that the student's mean ( $\bar{x}$ ) score was 4.22. It was in the high level. The deviation (S.D.) was 0.58 which was consistent with the research hypothesis.

The local curriculum improvement on the bamboo wicker for primary students, it found that the process of finding the quality of the curriculum has improved the curriculum based on expert advice such as writing objective, measurement and evaluation, and publishing. Then revised the curriculum again. When the curriculum was used with the experimental group, the learning management plan 1 was improved by adjusting the content to be shorter, concise and adjusting the learning management materials to be more interesting. When implementing the curriculum and evaluating improvements to the curriculum, some curriculum deficiencies were found. For example, bamboo sticks prepared for students were too short. Therefore, the course has been adjusted by adjusting the size of the bamboo sticks in the course. In making fan-type wicker, it takes quite a lot of time to weave due to the variety of patterns. Therefore, they may consider adjusting and changing to other types of wicker or may use a method to adjust the order of the learning plan by bringing bamboo fan weaving as the final plan.

## **Result**

The result of developing a quality curriculum consists of importance/background, objective, principle, content, structure and learning time, learning activities, learning materials / learning resources, measurement and evaluation, and the expected benefit and lesson plan.

The results of the students' knowledge assessment on bamboo and bamboo wicker after learning were higher than before.

The assessment results of bamboo wicker making skills after learning were higher than before.

The results of the assessment of the student's attitude toward bamboo wicker after learning were higher than before.

The result of a questionnaire on students' opinions towards the local curriculum on bamboo wicker.

The curriculum improvement results showed that in the process of finding the quality of the curriculum, the curriculum was improved according to the advice of experts such as writing objectives, measuring and evaluating, and publishing. After that, the curriculum was revised and applied to the experimental group by improving the learning management plan 1, improving the content to be short, concise and adjusting the learning management materials to be more interesting. After implementing the course and re-evaluating it, the course was adjusted by adjusting the size of the material in the course, and switched Unit 3 - Bamboo Fan Weaving to Unit 6.

## **Discussion**

The result of local curriculum development of bamboo wicker for Prathomsuksa 6 students at Klumnakkhawying 2 school (Ban Bowee) found that curriculum consists of importance/background, objective, principle, content, structure and learning time, learning activities, learning materials / learning resources, measurement and evaluation, and the expected benefit. The processes of curriculum development were 1) basic information study, 2) curriculum development, 3) implementation of the curriculum, and 4) curriculum evaluation and improvement. This process is consistent with the concept of Chavalit Chukampang (2016) that the components of the curriculum were derived from both documented background analysis and stakeholder interviews. Therefore, it gives a complete curriculum composition. This consistent with Ornstein & Hunkins, (2013), that the curriculum development involves a number of processes that help educational personnel and school understand the real purpose and involve everyone in the curriculum development.

The results of the knowledge assessment of bamboo and bamboo wicker, bamboo wicker skills and attitude towards bamboo wicker of the students after school were higher than before, because the researcher has studied the data by interviewing the learners about their needs. Therefore, the content and method of learning are appropriate, including the use of learning management media that is a picture of each type of bamboo which is a picture taken from the students' own locality, making the students more interested in learning. This consistent with Nirada Wechyalak (2018) stated that educational institutions should bring local wisdom to develop as a source of learning for learners. They must analyze and group local wisdom to apply in teaching. This consistent with the context of learners and educational institutions by setting objectives and arranging learning styles that include a variety of local wisdom according to interests and aptitudes of each age group. In addition, an appropriate learning evaluation form must be created. A local curriculum must be developed from the needs and interests of students who want to learn about their own local wisdom by using their own local resources as the main raw materials for wicker making. In the learning activity, learners learn in a practical way. This is in line with the concept of Mayuree Charoensiri (2020), which stated that teaching and learning must be adjusted to focus on learning through practice or doing (Active Learning), which is a learning process that allows

learners to learn meaningfully by collaboration between students together. This consistent with the idea of Saavedra & Opfer (2012) that the ability to work with others is an important skill in 21st century skills, whether or not students develop learning, is not related to that. It's not about the outcome alone, but the condition for success is mutual learning. Helping each other is the best way to learn. This consistent with Ariya Kuha et al. (2019) stated that, in the learning process in the 21st century, teachers must overcome "Mass subjects" towards integrated learning for development "21st Century Skills" (21st Century Skills), which teachers do not teach, but learners learn on their own. It is an arrangement that emphasizes learners to practice and act. The role of the learner has been changed from a recipient to a participant learner. This enables peers to understand objectives and achieve course goals by focusing on inquiry, data gathering, analysis and problem solving to develop higher thinking skills include with shift from Passive Learning to Active Learning. In addition, the speaker who manages the learning for the students is a person in the community of the students themselves, thus causing the students to have a good attitude towards the wicker. This is in line with Paitoon Ngew Thang (2017) who stated that the leader who teaches weaving is usually a local philosopher. Old people in weaving communities have valuable wisdom that has been passed down from generation to generation. This is a manufacturing process that has been passed down from family members for weaving for use in daily life and households. This is also consistent with the idea of Pesurnay, (2018), which states that Local wisdom is a phenomenon that shapes the ability of members of natural resource-dependent community cultures to manage and control natural resources in the environment in which they live.

## **Conclusion**

This research aims to develop a quality local curriculum that can be applied to other educational institutions in similar contexts. It also aims to develop students' professional skills by using resources that exist in their locality as the main raw materials for creating products. In addition, teachers who are local sages are brought in to teach the students, strengthening the school-community relationship. The benefits of wicker products can be used in household and can be sold. These can generate income for students, and they can apply this course to people in the community to increase their professional skills to earn extra income. In addition, the process and concept of this research provide a guideline for teachers to develop local curriculum for use in their schools.

## References

- Ariya Kuha and others. (2019). The world that changes learning through Active Learning. *Journal of Education, Prince of Songkla University, Pattani Campus*, 30 (2). 1-13.
- Carl A. E. (2009). *Teacher empowerment through curriculum development*. Cape Town: Mill Litho.
- Chaiwat Suthirat. (2013). *Curriculum Development: Theory into Practice*. Bangkok: V print.
- Chavalit Chukampang. (2016). *Curriculum research and development: concepts and processes*. Bangkok: Chulalongkorn University.
- Mayuree Charoensiri. (2020). *The Development of a Professional Learning Community School Model to Enhance Teacher Competencies in Learning Management Based on the Active Learning Concept That Promotes Creativity Ability of Primary School Students*. Thesis, Graduate School, Silpakorn University.
- Nirada Wechyalak. (2018). A Study of Local Wisdom Learning Centers in Muang District, Phitsanulok Province. *Krupibul Journal*, 5 (1). 87-96.
- Ornstein, A. C. (2009). *Contemporary issue in curriculum*. Boston: Allyn & Bacon.
- Paitoon Ngew Thung. (2017). Information system collecting basketry patterns. *Scientific journal and technology, Nakhon Sawan Rajabhat University*, 57 (9). 55-68.
- Pesurnay, A. J. (2018). Local Wisdom in a New Paradigm: Applying System Theory to the Study of Local Culture in Indonesia. *Earth and Environmental science*, 175. 1-8.
- Prawet Wasi. (2018). *Dr. Prawet recommends 10 characteristics of a good education system*. Retrieved from [https://www.matichon.co.th/education/news\\_943910](https://www.matichon.co.th/education/news_943910)
- Saavedra, A. & Opfer, V. (2012). *Teaching and Learning 21st Century Skills: Lessons from the Learning Sciences. A Global Cities Education Network Report*. New York: Asia Society.
- Sukanya Chaiphong. (2020). Quantity of bamboo production for distribution to bamboo demand of OTOP bamboo product processing group, Prachinburi Province. *Rajabhat J. Sci. Humanit. Soc. Sci.* 21(1), 245-254.
- Sun, Y., Liu, X. (2022). How Design Technology Improves the Sustainability of Intangible Cultural Heritage Products: A Practical Study on Bamboo Basketry Craft. *Sustainability*, 14 (9). 12058.
- Tawatchai Tienprateep. (2018). Development of bamboo wicker products. *Academic journals. Art of Architecture, Naresuan University*. 9 (2), 20-30.

**Contact email:** krudadada@gmail.com