



Exploring Local Wisdom in Nutmeg Cultivation: A Social Studies Teacher's Perspective in Fakfak, West Papua Province

Grace Roselina Situmorang*, and Deni Kurniawan

Universitas Pendidikan Indonesia, Bandung, Indonesia

Abstract

This study explores local wisdom in nutmeg cultivation and analyzes its factual condition in Fakfak City, West Papua Province. This area, a significant nutmeg producer with almost 80 percent of its territory in the form of nutmeg endemic forest, is an essential context in this study. Using a quantitative approach, the study involved 30 social studies teachers at the junior high school level. Data were collected through a Likert scale-based questionnaire and interviews with two social studies teachers. The main focus of the study was to evaluate teachers' understanding and views on the importance of local wisdom integration in the social studies curriculum. The questionnaire results showed that most social studies teachers understood the traditional techniques of nutmeg cultivation and agreed on the importance of integrating local wisdom. However, they also face challenges in linking learning objectives with local wisdom and applying innovative methods. These challenges include difficulties in evaluating and designing lessons that can accommodate local potential. These findings indicate the need for more support for teachers in developing the curriculum so that local wisdom can be optimally implemented in social studies learning at the junior high school level.

Keywords: social studies curriculum, local wisdom, nutmeg cultivation, curriculum integration, learning evaluation

1. Introduction

Fakfak City, also known as the "Nutmeg City," is a small city located in West Papua Province, Indonesia. It is renowned as one of the leading producers of nutmeg (*Myristica fragrans*), a tropical spice valued worldwide. Nutmeg is famous for its dual products: the seed (kernel) and mace (the aril surrounding the seed). These spices are essential ingredients in kitchens, bakeries, and traditional medicine globally. Indonesia plays a pivotal role in the global nutmeg trade, supplying approximately 60% of the world's nutmeg and mace, making it a critical export commodity (Joseph et al., 2023).

In addition to exports, domestic demand for nutmeg is also substantial and continues to grow annually. The variety of nutmeg that thrives in Fakfak is locally known as Henggi (ARRIJANI, 1970). Nutmeg plantations dominate the region, with about 80% of Fakfak's area covered by endemic nutmeg forests (Musaad et al., 2016). These plantations consist of two types: naturally occurring nutmeg plants that have been cultivated for centuries and nutmeg trees intentionally planted by farmers (Musaad et al., 2016). Both types contribute significantly to the local economy while supporting biodiversity conservation.

The area under nutmeg cultivation in Fakfak reaches 25,240 hectares. Fakfak has optimal agroclimatic conditions for nutmeg cultivation, characterized by high annual rainfall, stable temperatures ranging from 26-30°C, and mineral-rich volcanic soil (Leksmono et al., 2018). Nutmeg cultivation practices in Fakfak are carried out using traditional methods, including various stages, from land preparation, nursery, planting, care, and maintenance to harvest and post-harvest. This method has been applied for generations, with specific planting and maintenance techniques to improve the quality and quantity of yields (Dewi et al., 2020). Therefore, Fakfak not only contributes significantly to the global supply of nutmeg but also plays an important role in the preservation of traditional cultivation techniques that are culturally and economically valuable (Junaidi, 2019).

Fakfak Nutmeg (Hanggi) plays a crucial role in driving the local economy of Fakfak city. Nutmeg in Fakfak provides an important source of income for farmers and contributes significantly to the regional economic structure. According to recent data, nutmeg products account for about 40% of the total agricultural sector income in Fakfak, showing how dependent the local economy is on this commodity. The generations-old practice of nutmeg cultivation facilitates the maintenance of local wisdom and traditional knowledge and supports more than 2,300 households in the region (ILO, 2013). Nutmeg from Fakfak, with its high quality, unique taste, and less pungent odor, enhances product competitiveness in domestic and international markets, contributing substantially to the region's trade balance as well as improving the economic welfare of local communities (Gunawan, 2019).

Nutmeg cultivation in Fakfak is not just a plantation practice. However, it has a close relationship with the social, cultural, and economic contexts and various aspects of local people's lives. This reflects the importance of nutmeg as an integral part of community identity and a source of livelihood for residents. Nutmeg (*Myristica fragrans*) is a unique commodity requiring good care. In the life of the Fakfak community, nutmeg cultivation covers various aspects, such as belief systems, norms, cultural values, knowledge, economics, and agricultural practices. Nutmeg is not only a symbol of clan identity but also symbolizes the bond between man and nature and reflects the community's economic potential. In addition, nutmeg serves as a sign of brotherhood and can be used as a dowry, as well as playing a role in conflict resolution at the local level. The process of nutmeg cultivation is carried out traditionally, starting from land preparation, nursery, and maintenance to harvest and post-harvest periods, and has been carried out from generation to generation.

Integrating local wisdom into the basic education curriculum is essential to ensure that younger generations, as the foundation of the future, preserve their cultural values, maintain their historical roots, and acquire the knowledge needed to address social and environmental realities in a culturally sensitive manner. Understanding local cultural values can bridge past and present generations, fostering an appreciation for ancestral ways of life and cultivating cultural awareness and historical consciousness among future generations (Brennan, 2019).

Local wisdom reflects the distinctive cultural characteristics of a region, often demonstrated through ideas and practices that influence interactions between people, their environment, and their belief systems (Jumriani et al., 2021). It is crucial in promoting social cohesion and

regulating essential community activities. Furthermore, local wisdom shapes human-centered policies and practices by deeply understanding community-specific needs, which is vital for designing culturally appropriate, sustainable, and contextually relevant policies (Zuhri, 2024). A notable example of such wisdom is the “Meri Totora” tradition, a core aspect of nutmeg cultivation in the Fakfak community.

The Meri Totora ritual involves a ceremonial process of "feeding" nutmeg trees and is conducted during the major harvest season. This tradition reflects the community's deep appreciation for nutmeg trees, which are seen as providers of life. In this context, Meri Totora symbolizes a nutmeg woman, representing the source of livelihood and economic sustenance for the Fakfak people, particularly nutmeg farmers. In the Iha language, "Meri" means nutmeg, and "Totora" refers to a woman or princess, making Meri Totora the "princess of Nutmeg."

The ritual is performed during both planting and harvesting seasons, with the hope of ensuring abundant and prosperous harvests in the future. This practice highlights the community's strong cultural connection to nutmeg cultivation and its role in sustaining their way of life. Before the ritual, there is an agreement among family members to give offerings to the nutmeg plants, where not only food but also gold or Wendi is marked through the activity of wrapping nutmeg trees with white cloth by the elders in the family while reading mantras, with the aim that the nutmeg plantation will get a lot of income in the coming season. Other equipment can be clothes, clothes, and knives, which are later given to younger sisters or aunts. But along with the times and the entry of religion, giving offerings has begun to be abandoned, but implemented in other ways, namely the sale of crops, or donated to people in need or donated to the church. Fakfak people always maintain and preserve the tradition of nutmeg plants through the Meri Totora traditional ritual. This is because the nutmeg plant, which is the leading commodity of this region, is preserved because it is a source of livelihood for the Fakfak people.

Another example of local wisdom related to nutmeg cultivation is Kera-kera/ Sasi Pala. This tradition plays a vital role in the management of nutmeg yields. The kera-kera tradition is a customary regulatory system that governs when and how nutmeg can be harvested. These rules ensure that nutmeg plants can grow optimally, resulting in high-quality and sufficient quantities of nutmeg. Applying these traditions involves restrictions on harvesting times and methods and involves profound spiritual aspects. The kera-kera custom is also regulated in Regent Regulation 61 of 2023 concerning the Quality and Lowest Standard of Fakfak Nutmeg. At its core, the kera-kera/sasi nutmeg custom is a technical regulation and a form of respect for the environment. The Fakfak community believes that by abiding by this customary rule, they maintain the quality of the nutmeg crop and a harmonious relationship between humans and nature. Any violation of the Sasi pala rules is considered a form of non-compliance with customary norms, which can hurt crop yields and the balance of the ecosystem. The Fakfak local government also gives full support to the preservation of this tradition.

The new policy on curriculum is intended to authorize teachers to develop learning activities relevant to the student's needs, the actual condition of the school, and the necessity to link it to the surroundings. Local wisdom is essential to integrate into the basic education curriculum so that the young generation, who is the foundation for the next generation, does not lose out on basic cultural values, does not lose its historical roots, and has insight and knowledge of cultural attitudes towards social reality and the environment. Apart from that, knowledge of local cultural values will be a bridge connecting past generations with the present, to build longing for the lives of our ancestors so that the future of future generations has cultural awareness and awareness of cultural history.

The curriculum, designed to achieve educational objectives, is adaptable and subject to change depending on the context in which it is applied. These changes are necessary because the

curriculum must be tailored to each region's specific social, cultural, economic, and geographical conditions. Consequently, the curriculum is not fixed or universally applicable. Still, it must be flexible enough to meet local needs to remain relevant and effective in equipping learners with the skills required in their environment. The role of teachers in shaping the curriculum is crucial (Kong et al., 2021). A teacher's ability to adjust teaching methods to the needs of students is a key asset in the educational process. Teachers are not just instructors; the quality of their teaching is paramount. "Teacher quality is the single most accurate indicator of a student's performance in school" (Carter, 2000, p.18). Educators must focus on teaching, yet their expectations often have a more significant impact than the content being taught. A teacher's effectiveness and perhaps even empathy can influence a child's success more than their command of the subject matter. Meaningful learning occurs when students connect previous knowledge with new experiences and skills, particularly within real-world contexts (Brooks & Brooks, 1993). We must consider what to teach to achieve our goals, how to link learning experiences effectively, and what actions need to be taken regarding the instructional program, students, and teachers based on what we have learned.

This study will explore in depth how teachers' perceptions of integrating local wisdom related to nutmeg cultivation in the community in social studies subjects at the junior high school level. With its multidisciplinary nature, social studies is well-suited for incorporating local knowledge, especially about the local context, such as nutmeg cultivation in the Fakfak community. This subject encompasses social, economic, and cultural aspects, making it an ideal platform to discuss the relationship between humans and the environment and its societal implications (Sudarmaji & Irawan, 2021). Incorporating local wisdom values is essential for ensuring that the younger generation remains connected to their cultural heritage and can better understand and address their social and environmental realities from a cultural standpoint. Learning based on local wisdom can be applied in social studies, a subject closely related to community life and featuring complex material (Azizah et al., 2022). Using the surrounding environment as a learning resource in social studies can enhance student understanding, as the diverse and accessible environmental potential makes it easier for students to grasp (Widiastuti, 2017).

Although the local wisdom of nutmeg cultivation has important values and meanings in various aspects of community life in Fakfak, the practice is not integrated into the classroom learning curriculum. Although the education curriculum at the secondary school level contains various contents on agriculture and economics, specific knowledge on traditional nutmeg cultivation techniques and local wisdom of nutmeg cultivation is still lacking. In the context of education in Fakfak, there are significant obstacles to integrating the valuable knowledge of nutmeg cultivation into the learning process in schools. Teachers often face limited ability to design curricula that effectively link nutmeg cultivation aspects with learning materials (Arifin et al., 2021). This is due to the limited time available for lesson preparation and high administrative burdens, resulting in a lack of focus on developing relevant materials (Syamsuddin & Rahardjo, 2022). In addition, teachers are often less than optimal in utilizing the flexibility Merdeka Curriculum offers to incorporate local wisdom or local potential and regional distinctiveness, such as nutmeg cultivation, into their teaching strategies (Hadi & Nugroho, 2023). These shortcomings in curriculum planning and utilization hinder lessons that could improve students' understanding of the importance of nutmeg cultivation and the economic and cultural potential that this commodity can offer. This statement aligns with the results of pre-research interviews conducted by the author with two social studies teachers at a driving school in Fakfak District. In these interviews, both teachers confirmed that they rarely develop learning designs that link the social, cultural, and economic contexts in which students live. Instead, teachers more often

adapt learning tools that the government has designed, both those available on the Merdeka Mengajar Platform and in guidebooks provided by the government.

Curriculum integration has become a prominent feature of many educational reforms introduced in various countries since the early 2000s (Kneen et al., n.d.). This approach seeks to break down the barriers between traditional subject areas, fostering more holistic and interconnected learning experiences. It emphasizes linking different fields of knowledge, moving away from a rigid, discipline-focused structure to a more fluid and blended approach (Burke & Lehane, 2023). The main goal of curriculum integration is to enhance students' understanding in meaningful ways, allowing them to gain deeper insights into specific topics. Consequently, teachers play a crucial role in creatively embedding elements that are both significant and relevant to the curriculum (Nicholls, 1972). They have the flexibility to incorporate aspects that resonate with students' real-life contexts. To support this process, there are 10 distinct models of curriculum integration available for educators to utilize.

	Model	Explanation
	Cellular	The separate content of each subject is the focus
Intradisciplinary (connections within a discipline)	Connected	Opportunities used to make connections within a subject
	Nested	Multiple skills and concepts are 'nested' within one lesson
Across multiple disciplines	Sequenced	Topics are taught in a sequence such that topics with connections across disciplines are taught at the same time
	Shared	A concept or skill from one discipline is used in learning in another discipline
	Webbed	A theme is used to tie together multiple disciplines
	Threaded	Tools and strategies that can be used across disciplines are taught and learned
	Integrated	Patterns and concepts across multiple disciplines are taught and learned
'Inside the mind of the learner'	Immersed	An individual integrates information from across a range of disciplines, based on a particular topic/interest
	Networked	Experts from across disciplines interact to explore a common topic/concept

Figure 1. Fogarty's 1991 Continuum of integration

In this study, the most suitable model for curriculum integration is the shared model. This approach links different subjects through the learner's conceptual perspective. Shared planning occurs across two disciplines where common concepts or ideas serve as the organizing elements. One key question to help us understand this model is, "How are we working with other educators to identify the central ideas we share across subjects?" Broad academic fields, such as mathematics and science grouped as the sciences, language arts and history as the humanities, art, music, dance, and drama under the fine arts, and computer technology, industrial arts, and home arts as practical arts, provide overarching frameworks for integration. Within these related disciplines, collaborative planning and teaching focus on shared concepts, skills, and values, leading to a rich and cohesive integration of the curricula.

International organizations such as the World Bank and the United Nations have highlighted in recent years that indigenous communities encounter significant challenges in preserving their cultural identities (da Silva et al., 2023). One of the main issues identified is their limited access to quality education compared to non-indigenous populations, where curricula and

teaching methods often overlook, undervalue, or dismiss the knowledge and narratives of these communities. The absence of education on local wisdom can lead to the loss of essential knowledge, positive values, and practical skills crucial for maintaining and advancing industries like the local nutmeg sector (Mulyadi, 2021). Consequently, the younger generation in Fakfak risks not fully understanding or valuing the cultural and economic importance of nutmeg cultivation, potentially hindering the continuity of traditions and innovation in the local agricultural industry (Dewi et al., 2019). Studies suggest that the failure to integrate local knowledge into the curriculum can result in students having a limited grasp of the significance of local wisdom and the cultural values embedded in such practices (Yusuf & Mahmud, 2020). Social Studies (IPS) at the Junior High School (SMP) level is especially well-suited for incorporating local wisdom related to nutmeg farming in the Fakfak community due to its multidisciplinary nature and relevance to local realities. Social studies naturally explores social, economic, and cultural dimensions, providing an opportunity to integrate local knowledge in examining human-environment interactions and their societal effects (Sudarmaji & Irawan, 2021). The local wisdom of nutmeg cultivation touches on key areas such as economic development, cultural preservation, and environmental adaptation, all of which are integral topics in social studies. By including this local wisdom in the curriculum, students can gain a more profound understanding of the role of nutmeg in the local economy, the importance of cultural traditions, and the strategies for adapting to environmental shifts and global market dynamics (Andi & Santosa, 2022). This approach enriches learning with tangible local examples and promotes the development of cultural awareness and critical skills that are essential for addressing their community's socio-economic challenges (Fauzi & Aziz, 2020).

Effective teaching plays a critical role in the smooth functioning of educational systems and in enhancing the quality of learning. Research highlights that the actions of an effective teacher are key in stimulating both effective and efficient learning in students (Alzobiani, 2020). According to (Shishavan, 2009), teachers significantly influence their students' academic achievements, and their effectiveness can profoundly affect learners' outcomes. It is widely recognized that improving student learning outcomes is most effectively achieved through high-quality teaching, with particular emphasis on the teacher's ability to motivate students and facilitate their learning.

Despite the acknowledged importance of local wisdom in education, few studies have explored the integration of nutmeg cultivation practices into social studies curricula in regions like Fakfak (Sutaryo & Hadi, 2021). The gap in research includes a lack of empirical studies assessing the effectiveness of teaching methods that incorporate local wisdom into social studies content and how these approaches affect student comprehension and engagement. Additionally, there is limited research on how to adapt the social studies curriculum to encompass the full scope of local culture and economy (Yuliana et al., 2023). This indicates a need for further research to create a model that incorporates the local wisdom of nutmeg cultivation into the junior high school social studies curriculum. Understanding teachers' perspectives on the importance of integrating local wisdom into social studies is crucial for this development. Therefore, further work in this area is essential to ensure that these educational strategies are implemented effectively. Therefore, this study was conducted to determine the condition of local wisdom related to nutmeg cultivation in Fakfak from the perspective of junior high school social studies teachers and explore the possibility of integrating local wisdom into the junior high school social studies curriculum. This research is the first step to developing a curriculum that infuses the local wisdom of nutmeg cultivation in social studies lessons at the junior high school level.

2. Method

In this study, the approach used is quantitative descriptive, with data collection techniques through questionnaires. The questionnaire in this study adopted the research instruments of Bonsu & Baffour-Koduah (2023), Firat (2023), and García Sánchez (2023), which were further modified according to the research needs.

Table 1. Questionnaire indicator table

No	Indicator	Questionnaire items
1	Understanding and Knowledge of Local Policies	1,2
2	Ability and Skills to Integrate Local wisdom in curriculum	3,4,5,6,7
3	Collaboration and Support in Curriculum Implementation	8,9,10
4	Barriers and Suggestions in Developing the Curriculum	11,12

The method used was a population census or total sampling, where the entire population of 30 junior high school social studies teachers was included. This study aimed to explore local wisdom related to nutmeg cultivation in the Fakfak community, analyze the factual conditions in the field, and investigate how teachers integrate this knowledge into social studies learning at the junior high school level. Data collection was conducted through a survey using a questionnaire. Additionally, semi-structured interviews were carried out with two junior high school social studies teachers who have implemented the Merdeka Curriculum. The instruments used in this study included a questionnaire designed to analyze the factual conditions of learning related to integrating local wisdom on nutmeg cultivation in social studies education at the junior high school level. The questionnaire consisted of 12 questions or statements, along with semi-structured interviews with two social studies teachers. The data analysis technique employed was descriptive qualitative analysis, where the collected data was analyzed and summarized to provide a comprehensive overview of the conditions and situations observed in the field. The questionnaire in this study was adapted from the research instruments of Bonsu & Baffour-Koduah (2023), Firat (2023), and García Sánchez (2023) and further modified to meet the specific needs of this research.

In this study, to analyze the results of questionnaires using a numerical scale, the categories were divided based on the percentage of the maximum possible score achieved by respondents. The division of these categories aims to classify the evaluation results more systematically, making it easier to assess and interpret performance in the various aspects studied. The division of categories is done by following a formula that divides the total score range into several groups based on the percentage of the maximum score, which is 4.0 in this questionnaire. This category formula was adapted to produce four main groups that describe each respondent's level of achievement or performance against the evaluated aspects. These categories are Very Strong, Strong, Moderate, and Weak, with the score ranges set as follows:

1. Very Strong (80% - 100% of the maximum score) and Score range: 3,50 - 4,00.
This category indicates that the respondent demonstrated excellent or outstanding performance in the evaluated aspect. Scores in this range reflect a level of achievement that approaches or reaches the maximum score, indicating very significant success in meeting the objectives set out in the questionnaire
2. Strong (70% - 79% of the maximum score) and Score range: 3,00 - 3,49.
This category indicates that the respondent performed well in the evaluated aspects. While there are some areas for improvement, respondents scoring in this range have met most of the expected criteria and demonstrate a solid level of achievement.

3. Moderate (50% - 69% of the maximum score) and Score range: 2,50 - 2,99.
This category indicates that the respondent demonstrated moderate or average performance. Although the evaluated aspects have been achieved, there is considerable room for improvement. Scores in this category reflect the need for further development to meet higher standard
4. Weak (below 50% of the maximum score) and Score range: 2,00 - 2,49.
This category indicates that the respondent showed less than adequate performance in the evaluated aspect. Scores in this range indicate that there are significant issues that need to be corrected in order to meet the desired criteria. Aspects that fall into this category require further attention and intervention to improve performance.

Local wisdom-based education certainly has a positive goal for students, as (Asmani, 2012) mentions some of the objectives of education based on local wisdom-based education as follows.

1. Students should understand various aspects of local wisdom to know the advantages of the area where they live.
2. To be able to cultivate resources, engage in services or other activities related to excellence, obtain income while preserving culture, traditions, and resources favored by the region, and compete nationally and globally.
3. Students are expected to love the land of their homeland, be confident in facing the future, and aspire to develop local potential so that the region can develop rapidly in line with the demands of globalization and the information age.

This is the basis for the researcher to develop this questionnaire. Through this questionnaire, the objective is to evaluate the understanding and capability of teachers to effectively integrate the local wisdom of nutmeg cultivation from the Fakfak community into the Social Studies curriculum at the junior high school level. The questionnaire covers various aspects, including teachers' knowledge of local wisdom, ability to utilize relevant learning resources, and collaboration with local communities in educational activities. Additionally, the questionnaire aims to gather information on the support teachers receive from schools and the challenges they encounter in integrating local knowledge into their teaching practices.

By collecting and analyzing data on the facilitators and barriers teachers face, this study provides a comprehensive understanding of the practical opportunities and challenges associated with incorporating local wisdom into Social Studies education. Furthermore, the insights gathered from teachers will be valuable in providing recommendations to policymakers, emphasizing the need for greater involvement of teachers in curriculum development that is more attuned to local cultural contexts and potentials. The findings of this study, based on the responses from the questionnaire and interviews, are summarized and presented in the table below, which provides a detailed overview of the teachers' perspectives and the current state of local wisdom integration into the curriculum.

Table 2. Results of questionnaires measuring teachers' understanding of local policy integration in social studies learning

Statement	Average score	Category
Integration of local wisdom of nutmeg cultivation is very important	3,87	Very strong
Adequate school support	3,77	Very strong
Significant obstacles faced	3,57	Strong
Collaboration with community member	3,40	Strong
Involvement in curriculum development	3,37	Strong
Clear and measurable learning objectives	3,27	Strong
Understanding aspects of Local wisdom	2,93	Moderate
Participation in training activities	2,80	Moderate
Innovative teaching strategies	2,30	Weak
Effective evaluation methods	2,20	Weak
Skill to integrate local wisdom	2,13	Weak
Use of relevant learning resources	2,13	Weak

The research results from the questionnaire distributed to 30 social studies teachers in Fakfak District provide a clear picture of their views and experiences regarding integrating local wisdom of nutmeg cultivation in the social studies curriculum. Each statement in the questionnaire reflects teachers' views on the importance of local wisdom, their understanding of the integration, and the challenges they face.

3. Result and Discussion

3.1 Very Strong

Merdeka curriculum in Indonesia promotes the concept of "freedom to learn," allowing schools to design a curriculum that aligns with students' distinct characteristics and potential in each region (Kadek, 2022). A central feature of the Merdeka Curriculum is integrating local wisdom into the learning process, aiming to enhance student outcomes more effectively (Lutfiani & Fitriani, 2023). The curriculum grants teachers the flexibility to innovate, encouraging them to adapt the framework to address local needs and the unique conditions of their schools. Teachers play a pivotal role in formulating specific learning objectives that reflect the distinct nature of the subject, students, and classroom environment. As an integral part of a region's cultural heritage, local wisdom carries moral values and knowledge, serving as a crucial resource rooted in the regional context (Jumriani et al., 2021). It encompasses the traditional knowledge, values, and practices unique to specific communities or regions, representing collective experiences and understanding passed down (Zuhri, 2024).

These values develop through various forms, such as customary rules that have become unwritten norms and are still upheld today. This local wisdom is also seen as an important element in the characteristics of social science, which is reflected in attitudes, products, and processes. This is also supported by teachers who consider that the integration of local wisdom in learning is critical to providing a more profound and contextual understanding for students. The local wisdom referred to here is related to nutmeg cultivation as the primary commodity in Fakfak Regency. There are local traditional values that are recognized and continue to be carried out by the local community to this day. The teachers also consider that it is important to integrate this into school learning so that the next generation can understand and appreciate the local wisdom that has long developed in the community.

The curriculum serves at least three key roles: conservative, critical or evaluative, and creative. These roles align with several curriculum functions, including adjustment, integration, differentiation, preparation, selection, and diagnostic functions. In this context, the

conservative role is particularly significant. A primary responsibility of the curriculum is to pass down and interpret cultural and social heritage to the younger generation. As a result, schools, as social institutions, shape and guide student behavior in alignment with societal values, reflecting education's function as a social process. The curriculum is primarily oriented toward the past through its conservative role, but this role remains fundamental and essential. (Maya Amarta et al., 2023).

The analysis reveals that most teachers strongly support including local wisdom in the learning process. The first statement, which highlights the significance of this integration, received a very high mean score of 3.87, nearly reaching the maximum value. This reflects a deep understanding among teachers regarding the importance of incorporating local wisdom. It suggests that teachers recognize the environment or the local community as the most valuable resource for students and that integrating it into the curriculum is an effective strategy to achieve this. The interview confirmed that the teacher is highly aware of the importance of improving students' understanding of nutmeg cultivation. The teacher explained that nutmeg processing in his area is still not done optimally. Some parts of the nutmeg fruit, such as the pulp and seeds, are still wasted or not optimally utilized in the processing process. According to the teacher, this is an opportunity that can be developed further, significantly to increase students' understanding of the importance of sustainable natural resource management. The connection between nutmeg cultivation and the material in Social Science learning at the junior high school level is evident, especially in economics. In this context, teachers realize that the topic of nutmeg cultivation can introduce students to the economic value contained in nutmeg production, as well as provide a deeper understanding of how natural resource management can have an impact on people's economic lives. Some of the themes in social studies that are highly relevant to nutmeg cultivation include:

1. Activities to Meet Human Needs: Explains how nutmeg production can meet human needs, both in terms of food and economy.
2. Environmental Economic Potential: Exploring the economic potential of nutmeg cultivation and how its sustainability can benefit local communities.
3. Self-Habituation to Preserve the Environment: Teaching students the importance of preserving nature in nutmeg cultivation, such as environmentally friendly ways of planting and maintaining nutmeg trees.
4. Sustainable Development: Linking the concept of sustainable development to nutmeg cultivation practices that can provide long-term economic benefits to the community without damaging the environment.
5. Economic Actors: Introducing the role of nutmeg farmers as economic actors who contribute to the production and distribution of crops.
6. Law of Demand and Supply: Discusses how basic economic principles, such as demand and supply, apply to the market for nutmeg and its processed products.
7. Cultural Diversity of the Nation: Introduces students to the diversity of cultures in society, including traditional ways of processing and utilizing nutmeg that differ from region to region.

No	Social studies themes and sub-themes	Local wisdom value	Integration Model	Learning Objectives after integration
Class 7				
1	Theme : <i>Family is the beginning of life</i> Sub Thema: <i>Socialization in society</i>			
	Topic: Oral History	The origin of nutmeg in fakfak	Shared	Students understand folklore or fairy tales, legends or myths from their respective regions. Students understand the folklore, myths or legends about the origin of Fakfak nutmeg.
	Value and Norm	Customary norms in Sasi Pala	Shared	1. Students understand the definition of values and norms 2. Students understand the types of values and norms 3. Students can understand the values and norms in the Kera-kera/Sasi pala custom. 4. Students can explain how the Kera-kera /Sasi pala custom acts as an unwritten rule that is respected by the local community in Fakfak.
	Theme: <i>Diversity of the surrounding environment</i> Sub theme : <i>Activities to fulfill needs</i>			
	Topic: Getting acquainted with nature	Nutmeg as an economic driver for Fakfak's local community	Shared	Students recognize objects of human heritage before knowing the script or writing Students can recognize traditional objects used by the Fakfak community in harvesting nutmeg such as Gaegae

Additionally, statement ten, which addresses the support provided by the school, also received a positive evaluation with an average score of 3.77, suggesting that most teachers believe the school's support is sufficient. Schools play a critical role in supporting the integration of local wisdom into education . There are three dimensions of school support that are most important for teachers, namely: (a) competency support, (b) autonomy support, and (c) collegial support (Deci & Ryan, 2000). By incorporating local cultural values into the curriculum, schools can teach students about traditions, customs, and practices in their communities, such as the cultivation of nutmeg in Fakfak Regency. In this context, education is about intellectual growth and shaping individuals in alignment with societal and cultural values. This highlights the critical role of schools in preserving local culture. Education's "conservative function" means schools are responsible for safeguarding societal values and nurturing individuals' cultural identities. In Indonesia, education's purpose extends beyond producing knowledgeable citizens to developing culturally aware and engaged individuals. Schools are places for academic learning and essential for fostering pride and appreciation for one's culture. They are often seen as the key institutions for transmitting cultural heritage, values, knowledge, and skills across generations. Contextualized learning, which links theory to everyday practices, helps students understand and value local traditions that are meaningful to their lives. Schools can also involve local communities, inviting farmers or experts to share knowledge and offering students direct learning from real-life experiences. Through this approach, schools preserve local traditions and promote respect for these values, shape students' environmental consciousness, and ensure

the continuity of local wisdom for future generations. Overall, these findings reflect a strong understanding and support for efforts to incorporate local wisdom into education.

3.2 Strong

For a curriculum innovation to succeed, it requires the collaboration of engaged, knowledgeable, and dedicated stakeholders. These typically include representatives from different sectors of the teaching profession, such as teachers, school leaders, and professional or industrial organizations, as well as curriculum development and implementation bodies, like central and local authorities. Additionally, professional development providers for both pre-service and in-service training and members of the wider community play crucial roles. Integrating local wisdom and culture into education stems from the principle that each community has unique methods and practices tailored to its specific needs and context (Austin & Hickey, n.d.). In Indonesia, this notion is embraced through government policies that grant flexibility in developing the Education Unit Level Curriculum. This allows schools to design guidebooks based on a thorough needs analysis, ensuring that educational content aligns with local wisdom and cultural values (Curriculum Center, 2006). However, integrating local wisdom, such as knowledge of nutmeg cultivation, into education poses significant challenges for teachers. One major obstacle is the lack of resources and appropriate teaching materials, which hinders the ability to deliver accurate and comprehensive lessons on nutmeg cultivation practices.

Incorporating local wisdom books into the Merdeka curriculum is crucial, as it deepens students' understanding and appreciation of their cultural heritage while strengthening their connection to the local context (Kurniawan, n.d.). While teachers are generally aware of local wisdom within their communities and include it in their teaching, they often fail to systematically integrate it into their instructional planning. Furthermore, challenges arise from the lack of teacher training and limited knowledge on how to align local wisdom with the existing curriculum, as many educators are unfamiliar with context-based learning approaches.

To embed local knowledge into the Civics curriculum during the autonomous curriculum period, local values can be integrated into the curriculum and course content by developing themes or topics that reflect contemporary local knowledge. Incorporating local wisdom into school curricula is vital, as it supports character education and contributes to the development of a society with global awareness, often referred to as global citizenship. By introducing local wisdom and culture on national and international platforms, education rooted in local values can foster a globally minded community. The concept of global citizenship education has become a widely discussed topic in recent times.

Another obstacle is the limited awareness among students and parents about the importance of local wisdom, leading them to prioritize more general or modern forms of learning. Teachers also often face difficulties in accommodating students' diverse backgrounds, where not all students have the same experience or understanding of local culture. In addition, the limited time and facilities at school also become obstacles to implementing thorough and integrated learning with local wisdom. Nevertheless, most teachers understand the importance of setting clear and objective learning objectives, so despite the difficulties, they still try to integrate local wisdom in a structured way and according to students' needs to increase understanding and appreciation of local culture. The data presented shows that the aspects evaluated have scores that indicate a high level of strength. "Significant obstacles faced" scored the highest at 3.57, indicating considerable challenges faced in the context. This was followed by "Collaboration with community members," with a score of 3.40, indicating solid collaboration with community members. "Involvement in curriculum development" scored 3.37, suggesting that involvement is quite good. Finally, "Clear and measurable learning objectives" scored 3.27,

indicating that clear and measurable learning objectives are also quite strong. Overall, this data shows that despite significant challenges, collaboration, engagement in curriculum development, and setting clear learning objectives are pretty strong and support performance in the measured contexts.

Based on interviews conducted with teachers, it is confirmed that teachers start formulating learning objectives by analyzing the learning outcomes and then compiling a flow of learning objectives. The government has even provided some examples of learning objectives. For example, one of the learning outcomes used as a reference is “students can understand and have an awareness of their existence and can interact with their immediate environment.” From this learning outcome, teachers formulate learning objectives such as, “Family is the beginning of life” so that students can understand their existence as part of the family. After that, teachers formulate learning achievement indicators by the predetermined objectives. Thus, teachers can develop objective, clear, and measurable learning objectives by the outcomes to be achieved.

3.3 Moderate

The analysis reveals that two aspects fall into the moderate category: understanding local wisdom and participation in training activities. The understanding of local wisdom received a score of 2.93, indicating a moderate level of comprehension. Incorporating local wisdom into social studies learning can be done in various ways, such as by taking students on field trips to observe how indigenous communities practice their cultural values, discussing these observations in class, and exploring additional local resources to enhance both the students' and the community's understanding (Widyanti, 2016).. This score indicates that while there is a basic awareness of local wisdom, particularly its cultural significance, there is considerable room for deeper and more detailed knowledge. Specifically, understanding how local wisdom can be applied in teaching practices remains underdeveloped. Teachers may acknowledge the importance of local wisdom, but their ability to effectively integrate it into their teaching or curriculum is still limited. To address this gap, more comprehensive resources, tools, and knowledge are needed to equip teachers. Interviews with teachers confirmed that they are familiar with nutmeg cultivation, as they live in an area where nutmeg trees are abundant. Teachers directly observe the activities of nutmeg farmers at every stage, from land preparation to harvesting and post-harvesting. For instance, they are aware of the careful maintenance practices, such as farmers only cutting down non-productive nutmeg trees when necessary and avoiding large-scale deforestation.

Meanwhile, participation in training activities received a slightly lower score of 2.80, placing it in the moderate category. This score indicates that while a portion of teachers are involved in training related to local wisdom, the overall participation rate remains relatively low. Furthermore, the quality of the training may not be sufficient to fully equip teachers with the skills and knowledge needed to apply local wisdom in a meaningful and effective way within the classroom. The limited scope and depth of these training programs may prevent teachers from fully developing the expertise required to integrate local wisdom in a way that enhances student learning and cultural awareness. These two aspects suggest the need for targeted interventions to improve both the understanding of local wisdom and the opportunities for professional development. Although some progress has been made, the level of participation in training and the depth of knowledge among teachers is not yet optimal. There is a need to enhance both the quantity and quality of training programs, ensuring they are more accessible and comprehensive, and promoting active involvement and engagement from teachers. Addressing these areas would elevate teachers' knowledge and skills to a higher level, ultimately supporting more effective integration of local wisdom into the learning curriculum and fostering greater cultural awareness among students

3.4 Weak

Based on the analysis, four aspects related to learning quality, namely Innovative teaching strategies, Effective evaluation methods, Skill to integrate local wisdom and Use of relevant learning resources, each obtained a low score, with a score range between 2.13 and 2.30, indicating that all of these aspects are in the Weak category. The first aspect, Innovative teaching strategies, received a score of 2.30, indicating that while there are efforts to incorporate innovative learning approaches, their implementation is not fully effective. One of the most beneficial strategies instructors can use to enhance student learning in the classroom is encouraging students to connect their past learning experiences to new knowledge through class discussions, helping them generate new ideas that are useful in solving real-life problems (Akpan & Beard, 2016). This approach can help students build self-confidence, expand their knowledge, and facilitate their learning. According to (Abulhul, 2021), employing a blend of traditional and technology-based teaching strategies can enhance student learning and motivate active participation in the learning process. Creative and interactive teaching methods aim to improve students' knowledge and skills through various forms of engagement both inside and outside the classroom (Eli, 2021). However, the strategies currently being implemented may still rely heavily on traditional methods, limiting their ability to stimulate creativity or maximize student engagement. This could be due to the limited training received by teachers or a lack of understanding of the importance of new approaches to teaching.

Similarly, Effective evaluation methods, which scored 2.20, indicate that the evaluation methods implemented are still less effective. The existing techniques may not be able to measure students' understanding holistically, especially when applying local knowledge, so the evaluation results do not fully reflect students' ability to understand the material.

The next aspect, the Skill to integrate local wisdom, scored 2.13, which illustrates the low ability of teachers to incorporate local wisdom in learning. This suggests that although local wisdom is considered necessary, teachers may not have sufficient skills or knowledge to connect these local values with relevant teaching materials or do not know how best to integrate them into daily learning. The concept of integrated curricula continues the conversation with practical ways to transform that learning into real-life experiences that transfer effortlessly into future applications. (Robin Fogarty, 2009: 7)

The concept of integrated curricula continues the conversation with practical ways to transform that learning into real-life experiences that transfer effortlessly into future applications. (Robin Fogarty, 2009: 7) Finally, using relevant learning resources, which scored 2.13, indicates that appropriate and quality learning resources are still minimal. Teachers may struggle to access teaching materials that support the teaching of local wisdom or innovative materials, which worsens the quality of education. In the interview, the teacher stated that after determining the learning objectives, the teacher adjusts the learning material. For example, suppose the material taught is related to natural resources. In that case, the learning approach or method chosen is to take students outside the room to see the environment around the school. This aligns with the freedom provided by the Merdeka Curriculum, which allows each teacher to adjust learning models, methods, and approaches based on the learning objectives and themes taught. Therefore, learning does not always have to be done in the classroom. For example, when discussing history, considering that there is no museum in our city, the teacher replaces it with simple props such as stones or axes or uses digital media via the internet, such as Google Earth.

Overall, these results suggest that teachers need more training, tools, and support in developing innovative learning strategies, practical evaluation, and skills to integrate local wisdom to improve the quality of learning and support deeper understanding for students.

4. Conclusion

Even though teachers understand nutmeg cultivation well and realize the importance of preserving this local wisdom in the learning context, they still face significant obstacles in their practice. These obstacles include limitations in the training and resources required for effective integration into the social studies curriculum and challenges in compiling relevant teaching materials and adapting teaching approaches accordingly. In addition, factors such as lack of time, limited administrative support, and lack of adequate facilities also exacerbate the situation. As a result, even though teacher motivation and understanding are high, these obstacles often hinder the implementation of optimal.

Acknowledgment

I would like to thank Indonesia Endowment Fund for Education (LPDP) from the Ministry of Finance of Republic Indonesia for granting the Scholarship and supporting this research.

References

- Abulhul, Z. (2021). Teaching Strategies for Enhancing Student's Learning. *Journal of Practical Studies in Education*, 2(3), 1–4. <https://doi.org/10.46809/jpse.v2i3.22>
- Akpan, J. P., & Beard, L. A. (2016). Using Constructivist Teaching Strategies to Enhance Academic Outcomes of Students with Special Needs. *Universal Journal of Educational Research*, 4(2), 392–398. <https://doi.org/10.13189/ujer.2016.040211>
- Alzobiani, I. (2020). The Qualities of Effective Teachers as Perceived by Saudi EFL Students and Teachers. *English Language Teaching*, 13(2), 32. <https://doi.org/10.5539/elt.v13n2p32>
- ARRIJANI, A. (1970). REVIEW: Biology and Conservation of Genus *Myristica* in Indonesia. *Biodiversitas Journal of Biological Diversity*, 6(2), 147–151. <https://doi.org/10.13057/biodiv/d060216>
- Austin, J., & Hickey, A. (n.d.). *of SCIENCE*. 2(4).
- Brennan, M. A. (2019). The Importance of Incorporating Local Culture into Community Development. *Edis*, 2005(15), 1–4. <https://doi.org/10.32473/edis-fy773-2005>
- da Silva, C., Pereira, F., & Amorim, J. P. (2023). The integration of indigenous knowledge in school: a systematic review. *Compare*, 54(7), 1210–1228. <https://doi.org/10.1080/03057925.2023.2184200>
- Deci, E. L., & Ryan, R. M. (2000). The “what” and “why” of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11(4), 227–268. https://doi.org/10.1207/S15327965PLI1104_01
- Eli, T. (2021). Students' Perspectives on the Use of Innovative and Interactive Teaching Methods at the University of Nouakchott Al Aasriya, Mauritania: English Department as a Case Study. *International Journal of Technology, Innovation and Management (IJTIM)*, 1(2), 90–104. <https://doi.org/10.54489/ijtim.v1i2.21>
- ILO. (2013). *Kajian Pala dengan Pendekatan Rantai Nilai dan Iklim Usaha di Kabupaten Fak-fak*. 35. https://www.google.com/url?sa=i&rct=j&q=&esrc=s&source=web&cd=&ved=0CAIQw7AJahcKEwiAk6Gqg4n_AhUAAAAAHQAAAAAQAw&url=https%3A%2F%2Fwww.ilo.org%2Fwcmssp5%2Fgroups%2Fpublic%2F---asia%2F---ro-bangkok%2F---ilo-jakarta%2Fdocuments%2Fpublication%2Fwcmcs_342735.pdf&

- Joseph, G. S., Mandey, L. C., & Djarkasi, G. S. . (2023). The Impact of Postharvest Handling on the Nutmeg Seed (*Myristica fragrans* Houtt) Quality. *Jurnal Agroekoteknologi Terapan*, 4(2), 421–427. <https://doi.org/10.35791/jat.v4i2.51384>
- Jumriani, J., Mutiani, M., Putra, M. A. H., Syaharuddin, S., & Abbas, E. W. (2021). The Urgency of Local Wisdom Content in Social Studies Learning: Literature Review. *The Innovation of Social Studies Journal*, 2(2), 103. <https://doi.org/10.20527/iis.v2i2.3076>
- Kadek, H. P. (2022). The Effectiveness Of Using Teaching Modules In The Independent Curriculum In Elementary Schools. *EDUKASI: Jurnal Pendidikan Dasar*, 3(2), 171–180. <https://doi.org/10.55115/edukasi.v3i2.2481>
- Kneen, J., Breeze, T., Davies-barnes, S., & John, V. (n.d.). *Curriculum integration : the challenges for primary and secondary schools in developing a new curriculum in the expressive arts* Cardiff Metropolitan University Judith Kneen , j.kneen@cardiffmet.ac.uk This study was funded by the Higher Education Funding C. 1–33.
- Kurniawan, N. (n.d.). *The Studens ' Need of Workbooks Based on Local Wisdom in The Merdeka Curriculum* The Studens ' Need of Workbooks Based on Local Wisdom in The Merdeka Curriculum. 4(2), 1402–1413. <https://doi.org/10.51574/jrip.v4i2.1922>
- Maya Amarta, Ayu Lestari, Indah Cahyani, & Mustafiyanti Mustafiyanti. (2023). Peranan Dan Fungsi Kurikulum Secara Umum Dan Khusus. *ALFIHRIS : Jurnal Inspirasi Pendidikan*, 2(1), 82–89. <https://doi.org/10.59246/alfihris.v2i1.637>
- Musaad, I., Djuuna, I. A. ., & Attamimi, N. (2016). Land Characteristics and Their Relationship to Papua Nutmeg (*Myristica argentea* Warb.) Population in Fakfak Regency. *International Journal of Applied Environmental Sciences*, 11(4), 957–966. <http://www.ripublication.com>
- Musaad, M., et al. (2016). "Karakteristik Hutan Pala di Fakfak." *Jurnal Ilmu Kehutanan*, 4(2), 34-45.
- Musaa, H., et al. (2017). "Budidaya dan Pengelolaan Pala di Papua Barat." *Jurnal Agrikultur Tropis*, 10(1), 22-30.
- Nicholls. (1972). *ROUTLEDGE LIBRARY EDITIONS: CURRICULUM Volume 24 DEVELOPING A CURRICULUM*.
- Shishavan, K. S. & H. B. (2009). Characteristics of an Effective Teacher as Percived by Iranian Teachers and Learners of English. *Journal of Education and Learning*, 2(4), 130–143. <https://doi.org/10.5539/elt.v2n4p130>
- Smith, L. T. (2014). *Decolonizing Methodologies: Research and Indigenous Peoples*. Zed Books.
- Widyanti, T. (2016). Penerapan Nilai-Nilai Kearifan Lokal Dalam Budaya Masyarakat Kampung Adat Cireundeu Sebagai Sumber Pembelajaran Ips. *Jurnal Pendidikan Ilmu Sosial*, 24(2), 157. <https://doi.org/10.17509/jpis.v24i2.1452>
- Zuhri, S. (2024). *Bibliometric Analysis of Human Development and Local Wisdom : Global Trends and Insights*. 17, 2–16.