



The Jungle School: Towards a National Policy on Indigenous Education

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Abstract. This study looks into the implementation and impact of contextual education strategies among the Orang Rimba, an indigenous community in Indonesia. It uses a combination of experiential and systematic research methods to draw on data collected during field visits, interviews, and workshops with Orang Rimba and educational facilitators from the Sokola Institute. The research focuses on the educational model's three primary stages namely basic literacy, applied literacy, and internal organization. Our investigation reveals that the Orang Rimba's traditional knowledge and oral culture have a significant impact on their perception of formal education. Basic literacy efforts concentrate on fundamental skills in reading, writing, and arithmetic that are tailored to the community's current needs and cultural context. Furthermore, by expanding these abilities to useful domains like health literacy and financial transactions, applied literacy shows how important education is to day-to-day living. Lastly, the internal organization stage aims to empower the community by fostering self-sufficiency and internal educational leadership. The contextual education model developed by the Sokola Institute is showing encouraging results in closing the knowledge gap between formal education and indigenous knowledge. The blending of traditional knowledge with contemporary teaching methods preserves cultural identity and gives the Orang Rimba the necessary tools for interacting with the outside world. The study emphasizes how crucial it is to use culturally sensitive teaching methods to support indigenous communities' inclusive and sustainable development.

Keywords: Contextual Education, Indigenous Education, Cultural Preservation Orang Rimba, Indonesia.

1 Introduction

As a domicile for more than 70% of indigenous groups, Asia requires a special approach to education, particularly in introducing science and modernity, which are often Western-centric. Indonesia, with its diverse ethnic backgrounds and cultures, necessitates an education approach that aligns with the existing knowledge of communities. With 17,000 islands and over 600 ethnic groups, including hundreds of tribal communities, an inclusive educational strategy is highly essential. In this context, education observers emphasize the importance of an education approach that resonates with cultural backgrounds and experiences when encountering modernity [1].

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One aspect currently receiving attention from education stakeholders in Indonesia is the elaboration of curricula incorporating traditional knowledge. In a study on the Baduy tribal group in Banten, [2] found that although this group is relatively isolated and does not experience significant modern infrastructure progress, educational programs face difficulties penetrating various taboos within the community. Similar challenges are also encountered in the Kajang community in South Sulawesi [3], where issues arise regarding the requirement to wear uniforms in red or blue, while the Kajang people traditionally only wear black attire. Education experts agree that collaboration and the role of parents are crucial, and programs must begin with parents' understanding of the importance of education before encouraging children to attend school [4].

Additionally, literacy is a crucial component of education for indigenous communities because the introduction to writing systems, numerical skills, and language enables them to engage with other groups [5], [6]. Beyond facilitating interaction with the external world, literacy skills are expected to emancipate indigenous groups from the constraints of underdevelopment and colonization. Some scholars even consider literacy practices integrated into indigenous education as a pivotal part of the decolonization process. In the context of a nation with diverse socio-cultural backgrounds, literacy is essential for expanding knowledge about the diversity and differences among various groups, thereby fostering the creation of a multicultural setting [7]–[9].

While some experts stressed the importance of looking back at the process historically, we think that indigenous education should also consider the growth of the community and the rapid advancement of educational tools like the internet and mobile phones [10], [11]. Additionally, the national education system (Shaturaev 2021) and the development of the community should also be taken into consideration. [12] makes this clear when he proposes that we grant the local people the autonomy to decide what kind of education they receive. Another expert, has also demonstrated to us the significance of allowing the indigenous people to take charge of their education.

Examining the Sokola institution in Jambi and similar cases, our focus is on recognizing existing community knowledge and adapting learning materials through group interactions. Our proposal advocates a contextual education strategy, emphasizing basic literacy, interactive materials, and guiding communities in daily educational processes to address practical challenges [6], [13]. The goal is not merely to teach traditional subjects but to enable communities to navigate everyday problems effectively.

Sokola and the Displacement of Orang Rimba from Their Forests

This article represents a collaboration between a researcher and two practitioners involved in the development of alternative education for indigenous groups. Data were obtained through experiential support within the Orang Rimba community in Jambi from 2003 to the present. Systematic research was conducted as part of a master's education program by both authors. The first author served as a supervisor,

conducted field visits to the Orang Rimba community, and interviewed the Sokola organization's officials, as well as researchers and officials at the Ministry of Education and Culture.

We conducted workshops to recollect experiences of initiating contact with the Orang Rimba group, establishing the organization, and designing educational frameworks. Discussions, based on experiences and insights from secondary sources, were subsequently held to reconstruct the experiences of implementing teaching strategies for indigenous groups, addressing obstacles, and making on-site modifications.

The SOKOLA Institute or The Center for Education and Studies for Indigenous Communities, hereafter referred to as Sokola or Sokola Rimba, was established in 2003 by five former facilitators who supported the Orang Rimba indigenous community in a conservation project within the Bukit Duabelas National Park (TNBD), Jambi Province. Sokola, a registered association, is dedicated to delivering contextual educational programs for indigenous communities in Indonesia facing geographical and cultural barriers to formal schooling. Presently, Sokola is developing diverse educational facilitation programs for marginalized groups in remote Indonesian areas.

Sokola's inception was a response to the displacement of the Orang Rimba community from the Bukit Duabelas Forest area, a consequence of external development practices. The Orang Rimba, a scattered ethnic group across river ecosystems in Jambi, Riau, and South Sumatra, face cultural and geographical challenges. Their largest population resides in Bukit Duabelas, fostering cultural cohesion through the vast integrated forest.

Historically, the Bukit Duabelas Forest, rich in resources, was under the Jambi Sultanate's jurisdiction, obligating the Orang Rimba to provide forest commodities. Post-Independence Indonesia, marked by power transitions, saw absolute state control over forestry, leading to corporate exploitation, community displacement, and significant development projects. Development projects, transmigration, and oil palm plantation expansions triggered Orang Rimba migration, while timber activities by concession companies led to forest degradation. The region's degradation prompted a conservation NGO's advocacy, resulting in the designation of Bukit Duabelas as the Bukit Duabelas National Park (TNBD). However, this change became a new threat as TNBD zoning regulations compelled Orang Rimba settlement in utilization zones outside the area, seen as forced displacement under environmental conservation [14], [15].

The founders of Sokola, former facilitators of a conservation NGO, faced a dilemma as TNBD zoning implied Orang Rimba displacement. The literacy and numeracy facilitation, once part of a conservation program, faced criticism from Orang Rimba children questioning the value of education amid forest destruction. Changes caused by market systems, including rubber plantations and tree felling, exacerbated forest reduction, encouraging consumptive behavior among the Orang Rimba. Critical questions raised by Sokola's Rimba students and surrounding life issues led Sokola to formulate a community-based contextual education strategy. Sokola's approach

integrates environmental conservation with education, acknowledging the Orang Rimba's unique challenges. This initiative stands as a testament to the potential of contextual education in empowering and bridging gaps between formal education and the distinctive needs of indigenous communities.

Contextual Education Based on Community Issues

"Preserving the forest is indeed very difficult. Even the government can't do it, let alone me, who can only read, write, and count recently." This statement was uttered by Peniti Benang, one of the students at Sokola Rimba. In a broader context, it is mentioned that indigenous communities worldwide, including groups that are the most tangible victims of progress, experience systemic discrimination, high levels of poverty, and illiteracy. Meanwhile, the formal education system, with its rigid structure and centralized curriculum, is clearly bound to overlook the contextual issues faced by indigenous communities. Such education cannot bring about the expected social transformation. Education should be seen as a liberating process that never detached from social structures, specifically the social context that causes or contributes to dehumanization and alienation when education is conducted.

The implementation of the program begins with an initial study phase, a prerequisite to understanding the cultural context of the community and evaluating the feasibility of the program when implemented. Contextualizing education itself essentially stems from the practical understanding that what is taught (knowledge) must be useful for solving life problems and adapted to the contexts of the community's life, including its cultural context, so that the educational process integrates with the rhythm of daily life. The ways through which the Orang Rimba acquire knowledge in the fields of science and mathematics markedly differ from our conventional understanding of the universe. Consequently, it is imperative to immerse ourselves in and comprehend their unique logical frameworks before attempting to assimilate or impart such knowledge. Some excerpts from incidents at Sokola Rimba below are examples of how an educator must pay attention to local needs and cultural contexts.

One day, a teacher at Sokola Rimba explained knowledge about the distances between planets in our solar system. It was mentioned that the average distance from Earth to the moon is about 384,400 km, and a spacecraft is needed to reach it. Shortly after this explanation, a student asked, "Teacher, why do we need to know the distance to the moon? What's the use if we, the Orang Rimba, can't go there?" The teacher responded, "You indeed cannot go to the moon; this is for knowledge only." The student replied, "Ah, if we can't go there, what's the point of learning it? We don't want it, it's useless, just makes our heads hurt."

The other day, the teacher taught the students about the earth's day-night cycle. It was mentioned that the phenomenon of day and night is caused by the earth rotating around the sun. However, in the oral tradition of the Orang Rimba, it is believed that night occurs because a giant swallows the sun, and day happens because the giant regurgitates it. The next day, a father, whose child learned at Sokola Rimba, came angrily, "Teacher, don't teach anymore.

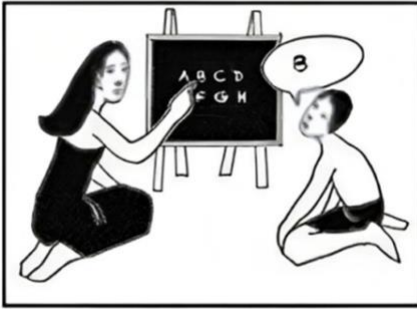
My kid says I'm stupid; don't teach about day and night." In response to this incident, the teacher apologized and refrained from teaching that topic. As a compromise with local knowledge, she told her students that outside, people believe the day is regulated by the earth's rotation around the sun, while in the jungle, the day is regulated by giants. All are correct; nothing is wrong. "After all, none of us have ever been to the sun," said the teacher, and the students collectively said, "That's right, Teacher, we won't go there; what's the use of learning it?"

On another occasion, the teacher taught the students how to do calculations. She presented them with a problem and said, "What is the result if one-third is added to two-thirds?" A student asked, "Teacher, what does that mean?" The teacher explained with an analogy that one-third is like sharing a cake among three people, so each person gets one-third. The student said, "Ah, that's wrong, Teacher, not one-third; we still get one, but smaller." The protesting student continued, "That's useless, Teacher; when we buy sugar at the market (outside the jungle), there is no buying one-third or two-thirds of a kilo, only half a kilo, one kilo, or two kilos."

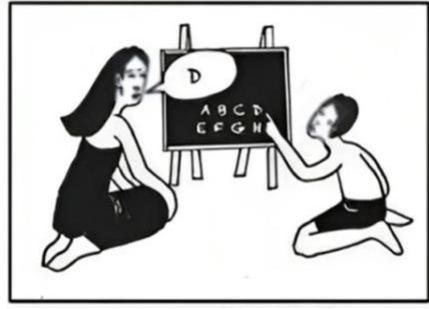
In summary, our approach aligns with the Sokola Institute's contextual education model, unfolding in three stages around community issues. The first stage focuses on 'basic literacy,' providing foundational skills in reading, writing, and arithmetic. Sokola's practical teaching method caters to the specific needs of illiterate groups, equipping them to navigate external changes. The Orang Rimba, residing in remote hunting and gathering areas, possess exceptional knowledge of the natural environment. Harari (2017:59) describes these sapiens communities as having superior knowledge due to their deep understanding of their surroundings. Orang Rimba children inherit this knowledge, crucial for their survival in the forest. Their expertise in plant species, animal habits, spatial orientation, and other natural elements, combined with their oral culture, enhances their memory, sight, and hearing. This indigenous knowledge is a testament to their adaptability and resilience in their unique environment.

Understanding these natural advantages led Sokola to develop a practical literacy teaching method that can be quickly absorbed and understood through the introduction of 'sounds' for each 'letter' taught. A letter is a representation of a sound (written), and a word/sentence is a combination of each sound (letter) arranged to form a meaning. A learner can be said to have understood each form and sound of letters (A-Z) when they have correctly passed through the four stages in the following illustration of the Teaching Method below.

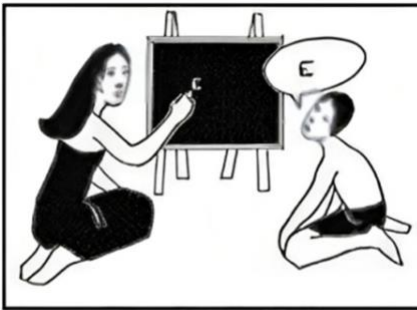
Learning methods illustration



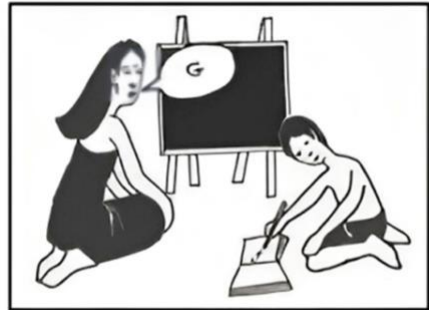
TEACHER SHOWS, STUDENT SAYS



TEACHER SAYS, STUDENT SHOWS



TEACHER WRITES, STUDENT SAYS



TEACHER SAYS, STUDENT WRITES

Source: Sokola Institue

Emphasizing sound when introducing each letter helps them understand the logic of reading, that when a sequence of letters (vowel/consonant/diphthong) is combined in several syllables, it will produce a word that is a combination of different sounds. For example, if a student understands that the letter 'S' represents the sound 'hissing' (the teacher demonstrates the sound of a snake), the student will understand when the letter "S" is placed behind a syllable like 'BI + S,' they will read 'BIS' because they comprehend the concept of hissing in the letter 'S' when placed at the end of another letter. The choice of words in reading lessons is also important to contextualize with the realities of daily life. Words like *rusa* (deer) and *siamang* (kind of ape like gibbon) are easily understood and have a strong connection to their life identity compared to words outside like *lemari es* (refrigerator) or *salju* (snow).

The second stage is the facilitation of 'applied literacy,' where basic literacy skills in reading, writing, and arithmetic that have been mastered are directed towards functioning in overcoming daily life problems and strengthening cultural identity. In this process, there will be various thematic teaching materials adjusted to the context of needs and the situation in the location. The life stories of some Sokola Rimba

students, at least, will provide us with an understanding of the practical significance of 'basic literacy' in overcoming problems as [16] [17] have indicated.

A student shared with his teacher an observation about traders in the market outside the forest who get frustrated when Orang Rimba shop. The student explained that when Orang Rimba buys various items such as salt, sugar, cigarettes, and a machete, the traders often get angry. "Why do they get angry?" asked the teacher. The student then explained the reason. He mentioned that if an Orang Rimba has a one-hundred-thousand-rupee bill, they would first buy salt and ask for change.

When the trader hands over the salt along with the change, the Orang Rimba would hand back the entire change for the salt and say, "Now, I'll buy sugar, where's the change?" The trader would then give them sugar along with the change, and this process would continue for each item, culminating in the purchase of the last item: the machete. The market traders were annoyed by this inefficient shopping method. "Why not just tell them you want to buy all these items, give them the one-hundred-thousand rupee bill, and ask for the change?" the teacher suggested. "We can't, teacher. We'd be confused if we did it all at once, and we're afraid of being cheated," replied the student.

The above incident's context then became the backdrop for the issues that needed to be addressed in applied literacy teaching materials (see also Matang and Owens, [18]). To tackle this, Sokola Rimba students were taught 'thematic counting' with a case-based narrative approach on 'shopping in the market.' Since mastering 'thematic counting,' Sokola Rimba students have always been accompanied by their parents to the market, and with their skills, they have contributed technically to their parents when shopping outside the forest, which takes half a day's walk. Traders were no longer upset after the students accompanied their parents during shopping. Another problem of interpreting numbers is described in the case below.

A father came to the learning center and asked for help because his child became ill after taking medicine from a health center outside the forest. "Why did the condition worsen? They've taken medicine, haven't they?" asked a teacher. "That's the problem, teacher. I thought giving a lot of medicine would make our child recover quickly, but it didn't, and now our child is weaker," said the father. Apparently, the father gave an excessive dose of medicine because he didn't know how to read the instructions on his child's medicine package.

Based on this empirical fact, this case became teaching material in applied literacy, where students were then taught how to read the instructions for taking medicine written on the medicine packaging or prescription. This new knowledge would be useful for the lives of the Orang Rimba, who are starting to access and interact with the world outside the forest. The frequency of Orang Rimba visiting health centers outside the forest has become more intensive as various new diseases are no longer manageable with local 'treatments.'

The two empirical-based stories above are contexts of daily community problems that serve as the source for the development of teaching materials in the applied literacy stage. Teaching materials in applied literacy always adapt to the context of needs, adjusted to the situation and conditions occurring at the program location. In Sokola Rimba, for example, applied literacy materials are also linked to the strengthening of cultural identity. Materials on 'forest insights' (folktales, customary rules, regional history, forest regulations, etc.) are taught to students involving local traditional figures as their 'teachers.' This cultural insight material is developed from the concerns of parents who feel their children are starting to forget traditional wisdom [4], [19]. This material is also combined with 'worldly insights,' such as facilitation of new knowledge from the outside world considered useful for the Orang Rimba when facing changes. Worldly insights include subjects such as Indonesian language lessons (to facilitate communication), letter writing (to express aspirations and opinions to the outside world), organic farming, participatory map-making, etc.

The third stage is the phase of internal organization and strengthening. In this stage, the learning processes are directed towards self-sufficiency. The goal is for the community to organize itself in conducting educational processes and know how to cope with problems in their lives independently. In this stage, there are facilitation activities that give rise to the internal organization formation program and teacher cadres among the Orang Rimba, ensuring that the educational process is continuous without depending on external parties.

2 Local Perceptions of Literacy

Unwritten oral tradition depicts the everyday life of indigenous communities. Certainly, introducing letters as representations of 'sounds' or numbers to support this oral tradition is a unique challenge in teaching. Several noteworthy aspects include the specificity of the phonetics or numerics of each ethnic group. We discovered various patterns in the way people recognize sounds and represent them as letters as a result of our experience implementing contextual education programs for indigenous communities in various parts of Indonesia.

For example, the Makassar people have a habit of pronouncing the letter 'N' at the end of a syllable with the sound 'NG': "Ikan" is pronounced "Ikang," and "Makan" is pronounced "Makang." Similarly, the Orang Rimba has a resemblance; they often pronounce the letter 'S' at the end of a syllable with the sound 'Y': "Awat" becomes "Away," "Kurus" becomes "Kuruy," or "Beras" becomes "Beray." Meanwhile, the Asmat people face difficulties distinguishing between similar-sounding letters, such as 'L' and 'R' or 'B' and 'P.' Thus, when asked to write 'Lima Ratus' (five hundred), they might write 'Rima Latus' or 'Bangku' (chair) might be written as 'Pangku.' On the other hand, the Sundanese have their quirks; supposedly, they struggle to differentiate between the letters 'F' and 'P': "Film" is pronounced "Pilem," "Tivi" is pronounced "Tipi," "Final" is pronounced "Pinal."

In addition to those complexity of transforming sounds and words into letters, there are specific issues related to teaching numbers or counting. For instance, in the case of ethnic groups in the southern coastal Papua, there is a binary numeric system in their

daily lives. Their counting system only recognizes two types of numbers: 'yamane' (one) and 'nakwa' (two). Consequently, when counting numbers exceeding their numeric system, they have a brilliant way of doing it. If 'yamane' is one and 'nakwa' is two, then three is called 'nakwa yamane' (2 and 1), four is 'nakwa nakwa' (2 and 2), and five is 'nakwa nakwa yamane' (2 and 2 and 1), and so on. This observation aligns with previous studies on non-Austronesian groups in Papua Island, demonstrating a distinctive numerical system. These groups employ counting words related to hands and feet, with physical representation involving both fingers and toes to symbolize numerical concepts [18]. Sokola uses a problem-solving approach to pique their interest in learning other numerical systems. A teacher might ask a student to calculate one million in the local numerical system, prompting questions like, "How many 'nakwa' are used? How many 'yamane' and 'nakwa' if we calculate three million five hundred forty-five thousand?". Presenting students with such perplexing questions is not intended to criticize the local numerical system but to demonstrate the practical utility of 'knowledge of a new type' in solving problems in their lives.

Another case of 'Sokola Kaki Gunung' in Jember, East Java province, deal with the Madurese ethnic community who are illiterate in Latin script but literate in Arabic script due to a perspective that prioritizes religious education over formal schooling. However, changes in the surroundings require the community to be literate in Latin script. The process of teaching reading and writing becomes easier to absorb because teachers only need to analogize Latin letters to the Arabic letters they have mastered. In this model, teachers for such communities need to have a background in being proficient in reciting religious texts, just like their students.

3 Conclusion

In conclusion, Indonesia demands a tailored educational approach, especially when introducing concepts of science and modernity that have predominantly been Western-centric. Indonesia, with its diverse ethnic backgrounds and numerous tribal communities, necessitates an inclusive education strategy that resonates with the existing knowledge of these communities. The challenge lies in navigating taboos and cultural nuances within these indigenous groups. Furthermore, our article specifically advocates for the establishment of indigenous education in Indonesia, focusing on basic literacy, providing them with the tools to interact with other groups, liberating them from developmental constraints and colonization. Integrated literacy practices within indigenous education are seen as a crucial aspect of the decolonization process, fostering independence and cultural preservation.

Our proposal emphasizes a contextual education strategy, that encapsulates a transformative approach that recognizes the intrinsic knowledge of the Orang Rimba community. In a transformative educational journey, the stages of basic literacy, applied literacy, and internal organization unfold, equipping illiterate groups with crucial skills for external changes. The applied literacy phase demonstrates the practical significance of foundational skills, empowering individuals to tackle real-life challenges like market transactions and medicinal instructions. Orang Rimba students' stories showcase the impactful results of thematic counting and health literacy on

community well-being, emphasizing the power of contextual education. Sokola Rimba's model becomes a testament to the potential of such education, bridging the gap between formal learning and indigenous communities' unique needs. It stands as a beacon for inclusive, culturally sensitive education, honoring and integrating local wisdom in diverse contexts.

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