

# Forest School Concept Based on Indigenous Knowledge for Orang Asli Schools: From an Expert's Perspective

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**Abstract**— Indigenous people or *Orang Asli* children in Malaysia experience difficulty in understanding the standard curriculum. The syllabus of schools seems not to match the intellectual understanding of *Orang Asli* children, resulting in loss of interest in class and refusal to go to school. This paper discusses the importance of introducing the Forest School concept in the education of *Orang Asli* children from an expert perspective. Experts in the indigenous field and community leaders were interviewed. Twelve respondents were selected using a purposive sampling technique. The interview subjects were at the age ranging from 45 to 65 years old, with the average age being 55. With the subject's consent, the recordings of semi-structured interviews were later verbatim transcribed, compiled and compared using protocol interview as an instrument. Five themes were thematically interpreted. The results indicated the need to (1) maintaining the identity of *Orang Asli*, (2) ensuring indigenous knowledge is not forgotten by the *Orang Asli* children, (3) preserving forests for sustainability and (5) upholding the *Orang Asli* children sense of belonging. This paper asserts that through Forest School, it is essential to learn and assimilate the modern world while maintaining their identity as *Orang Asli*. Indigenous knowledge needs to be incorporated into primary schools' syllabus to ensure that *Orang Asli* children learn about their heritage and sustainability in forests. *Orang Asli* schools must also conduct teaching and learning activities according to the interest of *Orang Asli* children to strengthen their sense of belonging. The outcome is that *Orang Asli* children will be keen and enthusiastic to learn the knowledge given during teaching and learning as it relates to their environment. This study has implications in the future which can provide a deeper understanding of the ramifications of the forest school outlook to teach and learn within a primary school setting.

**Keywords**-education; Forest School; indigenous knowledge; Orang Asli; sustainability

## I. INTRODUCTION

Education is crucial in producing individuals who can contribute to the local community and beyond [1]. The National Education Philosophy was first introduced in 1988 as a government effort to develop the holistic potential to create an intellectually, emotionally, spiritually and physically balanced individual [2]; this philosophy includes the *Orang Asli* of Malaysia. According to [3], the key to improving the country's competitiveness is in education and human resource development. Education can shape healthy social and economic development.

Malaysia's educational development landscape has shown improved approaches to produce better people and human development. For example, most schools in Malaysia use digital technology and information and communications technology (ICT) in their learning [4]. One of the methods of education through the Industrial Revolution 4.0 is the blended learning approach, which is a combination of online and physical learning. However, such a learning approach is still not widely adopted in rural schools because of geographical factors. Some rural settlements, such as Orang Asli villages, have difficulty accessing broadband services. Thus, their children have little exposure to digital technology and ICT. Being alienated from the world of academia is an injustice to the Orang Asli children because they have the right to education and development. Therefore, a new approach needs to be explicitly implemented for them. This effort can be undertaken through the Forest School concept. Forest School a type of education delivery model set outdoors where students are able to be in natural spaces to learn personal social and technical skills. Forest schools seek to encourage, motivate, engage and inspire children through regular positive outdoor experiences over an extended period [5].

## II. LITERATURE REVIEW

### A. *Orang Asli, the indigenous people of Malaysia*

More than 370 million indigenous people are spread across countries worldwide. Orang Asli are the original people of Peninsular Malaysia and comprise approximately 178,000 individuals or 0.8% of the national population of 28 million [6].

There are 18 Orang Asli sub-ethnic groups, whereby they have been split according to differing languages and customs. This group of several tribes practise a unique custom and hold social, political and financial traits which are differentiated from the prevailing social orders where they reside in. Similar to other indigenous communities around the world, numerous Orang Asli fight to keep up their culture and character, which are inseparably connected with their physical, financial, cultural, social, regional and spiritual relationship with the environment [7].

### B. *Forest School concept*

A school is a platform for the holistic development of people, especially intellectual development, and plays a role as a socialising agent. It is a critical platform for delivering teaching and learning, which are elements of education that are accessible and fully understood, especially for Orang Asli children who are different in terms of language and culture. Recently, through the Malaysian Education Development Plan 2013–2025, various Orang Asli education plans have been formulated and implemented to ensure that these children receive quality education. Therefore, a learning method can be developed through Forest School. Forest School is popular in England; it is not always practised in the woods but makes outdoor activities a medium for students to explore and learn [8].

Forest School uses a curriculum which is focused on the teaching and learning process of students. It is an ideal approach for students of all ages but is particularly suitable for younger children [9]. However, Malaysia's Forest School is still foreign and has not been widely applied by educators. This fact is evidenced by the importance of the learning process outside the classroom [10]. The findings show that activities outside the classroom allow students to be self-sufficient because they can make decisions without interruption. A variety of learning methods and initiatives can offer children a chance to have different play opportunities, including the chance to do outdoor activities that can impact children's learning [8].

Forest School is also a mechanism to promote environmental education further for all children. This approach allows children to assess their limitations, feel challenged and enjoy opportunities to develop their self-esteem and confidence. Forest School is a concept used to assist Orang Asli children to understand the straightforward learning process in schools based on their environment.

### *C. Indigenous knowledge*

The indigenous community see the world they live in its entirety. Their traditional knowledge, convictions, expressions and different types of cultural articulation have been passed on through ages. This data has been recorded in numerous structures by non-indigenous and indigenous individuals. Orang Asli settlements are mainly inland near forests and rivers, where food and water resources are accessible. From the beginning, their solution for survival has been based on the true nature of the descent. It is also part of their identity which connects humans and the environment. Therefore, Orang Asli's knowledge is comprehensive and in-depth, covering belief, ritual, culture, spiritual, economic, emotional and physical aspects based on the experience of living near nature.

According to [11], among rural people in developing countries, natives are mainly believed to have food products, medicines, fuel, building materials and other products. These essentials have influenced the relationship between human knowledge, the perception of the environment and have been incorporated into their cultural identity. For example, Orang Asli are well versed in the diversity of plants and the traditional ways of treating plant diseases. Proof of their success can be seen through the findings of researchers that vast knowledge is passed down through generations [12]. The Orang Asli community's environment and geographical demography influence their cultural expression considerably. Their rituals, songs, dance and music have been passed down verbally and was not evidenced in writing [13].

## III. PROBLEM STATEMENT

The lack of education among Orang Asli children is a significant problem for educators. According to [14], the minimum level for subjects included in the Primary School Assessment Test are not reached by about 60% of the Orang Asli children. Primary school education runs for six years, and the rate of decline in Orang Asli students is unmatched by the national average. The dropout problem is more severe in the transition from Year 6 to Form 1 of students aged between 12 and 13 years. Statistics shows that only 6 out of 100 Orang Asli students enter secondary school [15]. The data also show that 94% of the students drop out before completing Form 5.

This issue is confirmed by the data produced by the Education Planning and Education Division of the Ministry of Education Malaysia; the data show that the transition rate from primary to secondary school was 90.42% in 2012 and 90.31% in 2013 [16]. According to [17], the government has focused on lessening the dropout rate among Orang Asli students to 6% every year. Thus, the approaches and methods of learning and teaching need to develop new skills and pedagogical know-how [18] for Orang Asli students.

The Orang Asli community does not consider education as a serious matter because their lives are based solely on understanding and being comfortable within their scope. Thus, Orang Asli children prefer to skip classes, which causes school attendance rates to drop. This behaviour causes them to miss out on learning and experience challenges in re-understanding lessons. According to [19] truancy mostly causes Orang Asli children to fail in mastering necessary basic skills (i.e. reading, writing and arithmetic). Their behaviour

shows that they have low interest and low education [20]. Orang Asli have not fully embraced the changes which take place in the educational context of Malaysia for many reasons.

Orang Asli learners have low competence in the cognitive (knowledge) aspect because of their parents' low education level, which drives parents' lack of concern about the education of their children. These learners have difficulty understanding what their teachers are teaching because they are not usually present at school; thus, they are easily discouraged and frustrated and lack motivation [21]. Regarding the psychomotor (skills) aspect, Orang Asli children are interested in outdoor and environmental activities but have problems in the mastery of literacy and numeracy, which cause their difficulty in mastering subjects which require problem solving, boredom and lack of learning skills [22]. Regarding the affective (attitude) aspect, Orang Asli children have low competence because of their sensitive nature, low self-esteem, lack of understanding, educational development, near-sightedness, hopelessness and shyness [23]

#### IV. METHODOLOGY

This study takes a qualitative approach which is integrated with a culturally responsive methodology (CRM). Recent methodologies require researchers to develop relationships which enable them to have mutual respect and know the 'other' with whom they seek to study [24]. A case study of 12 experts in a rural village is conducted using a semi-structured interview. Experts from the indigenous field and community leaders are selected using purposive sampling technique on the basis of their knowledge on the Orang Asli community. The average age of the participants is 55. Their ages range from 45 to 65 years. They are from Semai, Semaq Beri, Mah Meri and Jakun tribes. The demographic characteristics are showed in Table 1.

TABLE I. DEMOGRAPHIC CHARACTERISTICS OF THE EXPERTS

<b>Demographic Characteristics</b>	
Male (%)	70%
Female (%)	30%
Mean age (years)	55
Semai (%)	40%
Jakun (%)	30%
Mah Meri	20%
Semaq Beri (%)	10%

All interviews are recorded with consent and later transcribed, compiled and compared. The interviews were examined using thematic analysis. All qualitative data from every stage of the iterative design in the CRM approach are collected using different strategies depending on the expected outcomes from each stage. These strategies include checklists, observation and document analysis. Indigenous standpoint theory [25] is used when working in communities. Respect and participation of the locals culturally, socially, spiritually and morally are needed to protect the Orang Asli interests.

## V. FINDINGS AND DISCUSSIONS

The results indicated five themes: (1) maintaining the identity of Orang Asli, (2) ensuring that indigenous knowledge is not forgotten by Orang Asli children, (3) preserving forests for sustainability and (5) upholding Orang Asli's sense of belonging.

### A. *Maintaining the identity of Orang Asli*

Orang Asli are the original inhabitants of Malaysia. They have retained much of their identity, which is distinct from the mainstream population. Experts believe that, in an educational context, Orang Asli should maintain their identity, but textbooks do not have anything which Orang Asli students can relate to. One of the respondents stated:

*'They learn about many things at school but nothing directly about themselves as Orang Asli children. So, in the context of this Forest School concept, I do hope they can learn about their origin, traditions and culture that can maintain their identity as Orang Asli.'*

Indigenous knowledge is vital for Orang Asli's future sustainability. It should be the foundation of Orang Asli children's learning process such that they can sustain such knowledge and be innovative and creative. Indigenous knowledge passed down from previous generations has the value of continuity and must be maintained in the life of Orang Asli in Malaysia [26]. Another respondent elaborates on what seems to be a similar view:

*'To see a culture and language disappearing is a devastating thing. I would hope that the Education Department would empower and formalize a setting where the younger generation are offered time to comprehend and at least learn about their tribal culture'.*

*'Before this, they learn from their elderly, parents, grandmother or grandfather. Now, they spend time more time in school'.*

According to [15], the findings may be helpful to the ones who was involved in designing the syllabus or curriculum for Orang Asli children. Vital elements should be included in the syllabus. such as elements that include cultural traditions, music, folk stories, history, flora and fauna and languages. According to [27] stories and oral histories are memorable and are practical tools for teaching and learning science. Supported by [28] that children's tales represent a community and express reality by connecting the peculiarities of the natural world and animals in a society. When asked whether Orang Asli language should be included in the syllabus, he responded:

*'It would be nice if, at school, they are taught in their native language so that students could easily understand what the teacher has to say'.*

The Orang Asli children will be more comfortable to communicate with the teachers and this show the need for teachers to share substance from their school culture to the students' culture [29] and try to communicate in their language.

*B. Ensuring indigenous knowledge is not forgotten by Orang Asli children*

The most immediate concern for the tribes is the loss of knowledge and traditions. When natives lose their grip on traditional knowledge, they suffer real consequences and are affected psychologically. An increasing amount of knowledge is disappearing because of the interruption of conventional channels of oral correspondence. As one respondent formulates it:

*‘Indigenous knowledge needs to be included in the Forest School syllabus, so young people can learn, practice and not forget about the knowledge mastered by their ancestors’.*

*‘When Orang Asli children go to school, they do not learn anything about living skills in the forest’.*

The obtaining of knowledge and aptitudes required for livelihood doesn't happen at school nor does it rely upon the abilities and practices learned at school. Learning resource abilities happens through being involved in daily activities through which local knowledge on plants, creatures and the environment is socially passed on. [30].

*‘If children learn about indigenous knowledge at school, they still can practise it when they go back to the jungle. They are so busy with their homework. They do not have time to follow their parents. At the same time, they lose interest to learn about their culture.’*

Children and adults do not spend much time in their communities anymore; thus, the older generation have difficulty transmitting their knowledge to the younger generation [31]. This problem is described ‘when a knowledgeable old person dies, a whole library disappears’ which was said in an old African proverb.

*C. Preserving forests for sustainability*

[32] demonstrates that forest schools include pragmatic abilities, which have been appeared to build the comprehension regarding human connection and the environment. Through play, Orang Asli children can increase comprehension and valuation for the natural environment and improve physical, social and emotional prosperity. The process empowers Orang Asli kids as it permits them to reflect and share their encounters and assist them with seeing how their activities influence others, themselves and nature. This is what the respondent said:

*‘In learning about indigenous knowledge, we can indirectly maintain the preservation of forests because Orang Asli is actually living life that can help the sustainability of the environment’.*

*‘Forest School concept should include how to take care of our jungle’.*

According to [33] external knowledge in natural settings, such as forest schools, can reinforce the building of relationships between individuals and nature, which is not manageable in traditional education. This statement is in line with statement [34] on the increasing concern about the absence of association between the natural environment and the children. The respondent stated that:

*‘Other people should know that the forest is our home. Learning more about the forest can help society to understand and take care of the forest for the next generation’.*

Thus, the Forest School concept has the potential to shape pro-environmental behaviours in Orang Asli children. [35] propose that children should gain involvement in the true environment, such as forests, which has been shown to increase their likelihood to return to these areas and enjoy nature more. [36] suggest that students with high exposure to greenness show good academic performance in English and Math.

#### *D. Upholding the Orang Asli’s sense of belonging*

Orang Asli find following teaching and learning processes challenging because of their weak interaction and communication with teachers. This weakness has a negative impact on student learning development. Thus, attending classes improves mentality toward knowing, comprehending and thinking and upholds their sense of belonging. According to [37], methods, for example, those proposed by Forest School, can advance a feeling of self, feeling of having a place and social connections.

*‘Most importantly, Orang Asli children can feel a sense of belonging. When they are at school, they also learn about themselves as part of an Orang Asli community’.*

The relationship between teachers and pupils is an excellent form of social quality. When teachers and students form good relationships, students look forward to going to school every day and have a high sense of belonging until they finish their studies [38].

*‘Teachers and other students need to accept Orang Asli students and should not intimidate them. They need to feel happy being in school’.*

Future studies must include an educational provision which considers these students’ indigenous way of life and prepares them to become full members of the Malaysian society [39].

## VI. CONCLUSION AND RECOMMENDATIONS

To maintain the sustainability of the Orang Asli heritage, its children are exposed to learning methods based on their indigenous knowledge. These methods are implemented in subject areas. The Forest School concept can also have a positive impact on Orang Asli’s way of life and culture. It can advance their socio-economic education. Teachers can also come up with a new approach to quality teaching for the minority. This effort ensures that Orang Asli children do not miss out on education because they need to compete with the country’s rapid development. Moreover, it keeps Orang Asli from losing their identity and indigenous knowledge, which should be retained in the community because their culture is unique and should be shared with others.

This study’s findings provide information on how Forest School should be implemented to ensure the successful execution of this approach. Further studies involving quantitative assessments of education outcomes would strengthen knowledge in schools. These studies would offer policymakers critical insights to improve the curriculum. More aid, support, training and engagement for teachers are required for the Forest School concept to become a conventional method in addressing curriculum goals. The present study’s findings also provide input on the professional training of teachers in Orang Asli schools.

Forest School has pulled in impressive enthusiasm from researchers, yet the vital point is on a particular component of the forest school experience and its effect. Thus, this study focuses on the Forest School concept, which needs to be introduced to Orang Asli schools to improve teaching and learning and make them suitable for the community. Several limitations must be considered. One limitation is the small study sample, particularly the limited number of respondents per tribe. This limitation restricts the generalisation of the findings. Future research needs to include larger sample sizes of culturally, ethnically, socio-economically and geographically wider populations. Despite these limitations, this study contributes towards the understanding of the Forest School concept within the Orang Asli community.

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