

Open and Distance Education to Promote Sustainable Development of Indigenous People in Indonesia

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Abstract

Indigenous people have various kind of knowledge of their harmonious relationship with their surrounding environment. They are able to thrive by using any available natural resources without destructing their complex ecosystem. Meanwhile, economic development program tends to promote economics growth without considering sustainability. People try to exploit as many as possible any available resources without considering any further damage. There should be an effort to integrate the indigenous knowledge into education system to preserve the knowledge. The integration of indigenous knowledge into education must be proceeded by selection and collection of the knowledge.

Universitas Terbuka can support this education system by preparing a specially designed learning material and operating a network of distance learning facilities.

Keywords: indigenous people, indigenous knowledge, sustainable development, open and distance education.

Chapter I Introduction

There are many indigenous people in Indonesia. They have various and unique culture, religion, social and economic organization. They are described according to ILO Constitution 169 :

- Peoples whose cultural, social and economic conditions distinguish them from other sections of the national community and whose status is regulated wholly or partially by their own customs or traditions or by special laws and regulations; and
- Who are regarded as indigenous on account of their descent from the populations which inhabited the country or a geographical region to which the country belongs, at the time of the conquest or colonisation or establishment of present state boundaries and who, irrespective of their legal status, retain some or all of their own social, economic cultural and political institutions (Education International, 2004).

Their number is about 1,5 to 2 million. In terms of their dwelling places and economic subsistence, they are divided into three categories: nomadic, semi-nomadic and permanently isolated people (Swasono, undated). Some indigenous people in Indonesia are Baduy in Banten, Kubu in Jambi and Bajo in South Sulawesi.

Indigenous people have various kind of knowledge of their harmonious relationship with their surrounding environment. They are able to thrive by using any available natural resources without destructing their complex ecosystem.

Most indigenous people live in rural area, even in the most remote one. It is not uncommon that many still live in forest area. Meanwhile, the Bajo people in South Sulawesi lives in coastal areas.

Their way of living and geographical condition become a barrier for them to get the very basic of government development effort. However, they do not care much about that, considering that many of the development effort is unfit with their own lifestyle. As a result, they carefully and wisely utilize any available resources.

The indigenous people believe that they inherit their environment as a celestial mandate which has to be conserved even by so many supranatural beliefs. That makes our modern civilization society regards them as unscientific lifestyle.

Actually, many supranatural beliefs of the indigenous people depict a complex interrelated knowledge of natural process. The interrelated process is the most important part of living system.

Indigenous knowledge is described as : *the knowledge that people in a given community have developed over time, and continue to develop. It is based on experience, often tested over centuries of use, adapted to local culture and environment, dynamic and changing* (Unesco, 2000).

Indigenous knowledge is passed from one generation to other by means of traditional education. It is a method of informal education which is based on folklore, folk drama, folk story, songs, taboos and superstitions. Most indigenous people are still illiterate, hence they depend on their oral tradition

This knowledge guides the people to exist on his land. By no means can they survive without a complete understanding of their nature. For instance, their method of farming can produce a sizeable amount of food from forest land. However, the forest land is cultivated almost without any damaging effect. The harmonious combination of their farming method and environment conservation is very far different from comercial logging which often left the land unproductive and even irrecoverable for years.

Indigenous knowledge will benefit others too. The knowledge of how to explore without endangering their environment is a living example of sustainable development.

Chapter II **Sustainable Development**

Our age is marked by many unpredictable changes. The change will eventually produce an inequality, either among nations or within a nation. As a result, a part of people will be marginalized. Those marginalized people is usually consist of women, rural area dweller and indigenous people.

To overcome the inequality, many marginalized people try to exploit as many as possible any available resources without considering any further damage. Meanwhile, the usual economic development program is only promoting economics growth without considering sustainability. It will eventually makes a degradation of environment quality, inequality and marginalization. As a result, development programs must be in accordance with principles of sustainability.

Sustainable development is a development activity that meets the needs of the present without compromising the ability of future generations to meet their own needs (World Commision on Environment and Development, 1987).

Modern development process is partly characterized by efficency and effectiveness of using natural resources. It support an assumption that the more we consume natural resources efficiently and effectively, the more prosperous we are.

The problem with ever increasing development process is degradation of environmental quality. Even renewable natural resource takes a long time gain its previous value. Improper logging, for instance, can harm dot only balance of ecosytem but also biodiversity.

Principle of sustainable development underscores an interconnection of human health and well-being, the environment and the economy (Manitoba Department of Education and Training, 2000). Economic development paradigm is inseparable from nature conservation. Otherwise, the development will disrupt natural balance and human welfare.

A sustainable human health and well-being is characterized by people coexisting harmoniously within local, national, global community and with nature. A sustainable society is one that is physically, psychologically, spiritually, and socially healthy.

A sustainable environment is one in which the life sustaining processes and natural resources of the Earth are conserved and regenerated. Development process should also preserve environment quality. A well-balanced environment is a prerequisite of an ongoing economic development.

A sustainable economy is one that provides equitable access to resources and opportunities. Its decisions, policies and practices respects cultural differences, and does not exhaust the Earth's resources.

Chapter III

Open & Distance Learning Program in Indonesia

Open and Distance learning that was adapted for the villagers is only the primary and secondary education level. It is according to the National Program of Universal Nine-year Basic Education. The programs are Package A, Package B, Open Junior Secondary School and Open Islamic Junior Secondary School.

Package-A Program is a model of out-of school education for children that could not go to primary school or discontinued at early years of their primary school education.

The students of the Package-A learn in a learning group of about 30 people. They learn two to three times a week in the afternoon for two hours each. As a rule, learning activities takes place at primary school building, mosque or tutor's house. Subjects taught are Pancasila Civic Education, Indonesian Language, Mathematics, Natural Sciences and Social Sciences. Students who pass the National Final Examination are awarded with certificates that are equivalent to the regular primary school certificate.

The Package A program follows the principles of an open learning system in terms of using self-learning materials, yet the learning process is still conducted in the conventional way. It uses face-to-face method of learning, where teacher meets students in a same place.

Package-B program is being developed as another kind of alternative open learning system for junior secondary school student. Learning activity is conducted in groups of 30 to 40 people, guided by 5 tutors in each subject areas of Mathematics, Natural Sciences, Social Sciences, English, Pancasila Civic Education. Beside those subject areas, some local content subjects is also taught, as handicraft, dancing, art, mechanics, carpentry, woodcarving, pottery, and so forth.

The ways of learning are consisted of three type: independent learning, small-group learning and tutorial learning. Independent learning means every student reads the modules and does their homework individually. Small-group learning means a group of students discuss content. While tutorial learning means the tutors discuss with the students about learning problem that cannot be solved in independent and small-group learning.

The Open Junior Secondary School and Open Islamic Junior Secondary School are units of conventional Junior Secondary School or Islamic Junior Secondary School. Meanwhile, Package A and Package B Program are independent unit unrelated to a conventional school.

The students are usually from low-income and low level of education families. The parents tends to have a negative attitude toward education. Hence, there has not been any direct correlation between the level of education attained and accesibility to the job market

Academic achievement of the students is generally considered as lower than the academic achievement in the conventional one. One reason of this disadvantage is that the

open and distance learning system lacks professional management staff, student support service and up to date learning materials (Pustekkom, 1999).

The Indonesia Open University has a vast network of distance learning facility. Some of its programmes like environmental science, agriculture supervisor, biology and teacher training have much in common with principle of sustainable development. Besides its role in conducting high education, it can initiate a special open learning toward indigenous community in remote area. This open learning program is in the level of junior secondary school, almost similar to SMP Terbuka programme in several parts of Indonesia.

Chapter IV

Incompatibility of Modern Education System and Indigenous Knowledge

Modern education was based on scientific knowledge-which evolved and developed in the western industrialized world. Modern education systems has no place for either indigenous knowledge or indigenous methods of education (Gough,).

The widespread development of modern scientific education can eventually wipe out the indigenous knowledge. It can render indigenous knowledge irrelevant with rapid growth of natural resources exploitation. As the indigenous principle often viewed as a backward argument irrelevant with contemporary view, it is left behind.

Modern education system backs market economies. The market economies emphasize a rapid economic growth resulted from natural resource exploitation. This practice tends to support unlimited exploitation of natural resource. As a result, many improper development activity eventually degrade soil, mineral, water, air and biodiversity.

On the other hand, indigenous knowledge deals with subsistence economies. The point is that people only take as many resources as they need. They use delicate effort to keep the whole nature functioning. This approach is considered as uneconomical, because the indigenous knowledge is impractical due to its laborious and time consuming practice to extract a limited amount of natural resources.

Modern science and indigenous knowledge have their own different method of thinking. Modern science promotes critical thinking and skeptical attitude. Unlike modern science, indigenous knowledge remains mostly as beliefs without any rational explanations.

In the long run, the two distinct and separate method of thinking will eventually benefit each other. The indigenous knowledge can bear new insight in the modern scientific community. This is not surprising, regarding that many scientific achievement comes from discovery of new unthinkable previously facts.

Indigenous people have their own specific value and wisdom in dealing with nature. This is a valuable asset to promote sustainable development. In the light of keeping balance between traditional value and development needs, there must be an appropriate educational system.

Furthermore, the modern education system that rapidly reach out many indigenous people will attract many adolescent of the community into a new way of thinking. Unfortunately, the new one can eventually alienate the young people from their community. Those people will seek new opportunity based on present job requirement. They will not care, let alone preserve their heritage of older generation. Without any commitment of the indigenous people, their environmental sustainability will be at stake.

Another consideration of preserving indigenous knowledge through education is appropriateness of some aspect of the knowledge in our present condition. Although it is conserved through generations, it doesn't mean that the whole indigenous knowledge will be conserved completely.

As we know, some practice of indigenous knowledge, including their custom and tradition are unacceptable to our legal system. We should carefully select which part the knowledge which can be integrated into our education system. It is a complicated task, considering that those people will surely want to preserve their knowledge completely. Their reason is that their knowledge is a complete system which means nothing unless it is completely intact.

The ultimate aim of preserving the knowledge is to empower those people to live not only in their environment, but also to live in present situation. They must be able to conserve their sustainable way of life in complicated situation. They must have a competitive advantage so as they are not marginalized.

Chapter V

Design of Open & Distance Learning Program Which Support Sustainable Development For Indigenous People

Learning plays a vital role in sustainable development, especially in poverty reduction, sustainable health and disease prevention and the protection of the environment (Khan, 2001). Any effort to empower the indigenous people must be began by education. Education is regarded as prerequisite to better ensure our competitiveness in adapting a competitive and unpredictable change.

Students can learn the very basic concept of sustainable development since their early age. It will shed light of consciousness that sustainability is an inseparable principle of human activity in every field of its activity.

To understand the basic concept of sustainable development, students need several knowledges like mathematics, natural sciences, social sciences, human ecology and other discipline. These subjects are basic of scientific understanding of our living ecosystem.

To apply the principle of sustainable, students require a set of values that reflect the importance of balance and harmony among the health and well-being of human, the environment and the economy.

All students will be decision makers of tomorrow. They must have a capability to analyse every complex problem dealing with environment sustainability. Besides knowledge, students must be trained in skills of literacy & communications, problem solving, human relations and technology.

The proposed steps to integrate the indigenous knowledge into education is as follows:

1. **Collecting and selecting indigenous knowledge.** There are a lot of various indigenous knowledge in every indigenous community. We do know not every aspect of the knowledge can be transferred to next generation, considering that some aspects are too risky or contrary to our present understanding of religious belief and positive law. Accordingly, we should select some aspects that are relevant and beneficial both for the indigenous community and the whole society. The product is a database of indigenous practice that can be taught in open and distance education system that is specially designed for the people.

The selection of indigenous knowledge must be very careful so as not to degrade the indigenous knowledge itself, while we preserve their knowledge of their environment. The knowledge is characterized by interrelating knowledge that cannot be separated.

2. **Inclusion of indigenous knowledge into distance education program.** The indigenous knowledge will be the local content of the open and distance learning program, like the Package A and Package B Program. We should prioritize indigenous language, environment management, alternative medicine and students initiative to develop their own society and their economic welfare sustainably.

Indigenous language is a key to transfer and preserve knowledge between generations. Most indigenous languages have only oral aspect and a limited number of native speakers. The language is also a valuable tool to expose their resourceful knowledge.

Survivability of indigenous people depends heavily on their adaptive environment management practice. Their traditional wisdom to conserve environment includes many seemingly unrelated practices yet proved beneficial both to environment sustainability and economic gain. This makes indigenous environment management a priority to be included as local content in the curriculum.

Alternative medicine is an important aspect of indigenous knowledge. Many indigenous communities live in remote areas which hamper immediate health care facilities in case of emergency. However, they have their own health care capability based on their own knowledge of traditional medicine. This knowledge must be conserved through education system.

The most important aspect of the curriculum is inclusion of an attitude and capability to achieve an economically feasible gain by exploring natural resources sustainably. This will bridge a gap between the modern economic paradigm and environmental sustainability.

3. **Involvement of local tutor.** To better ensure acceptability of the community toward the development program, we should involve the community leaders. In the long run, they can even be recruited as tutors. We should also involve local government, NGO, university student and even private enterprise in the program. However, their participation is based on community's self-sufficiency and initiative

The vast and varied capability of Universitas Terbuka is a valuable asset to support these steps. UT can join effort to create a database of indigenous knowledge in most parts of Indonesia.

The database is a source of learning material to be used in the open and distance education. The learning material must be designed along the principle of self-contained and self-instructional.

Besides preparing the learning material, UT can develop and maintain an open and distance education for the people. The system is very useful because it can be joined by students who live in remote areas and cannot attend a strictly scheduled school program

Unfortunately, there are several constraints of the program, like:

1. **Financial:** a self-help community education program depends as much as possible on community's initiative and financial support. Education is a long-term investment which deserves community support in order to function sustainably. However, many indigenous communities have a common skeptical and even suspicious perception toward external involvement in their children's education.

Meanwhile, development and distribution of learning material needs a relatively huge amount of funds. It is beyond the local community's financial capability to fulfill these needs.

2. **Human resource.** Effort to involve as many local tutors as possible in teaching the knowledge is often handicapped by lack of capable tutors. Many people who are capable of tutoring in the subject usually find out more high-paying jobs. Outside tutors can overcome this shortage to some extent, providing they have special training in indigenous knowledge.

3. **Curriculum development:** Selecting indigenous knowledge which is suitable and relevant to our sustainable development is rather difficult. In one hand, we should adapt the knowledge to our present modern context. In the other hand, the selection process should not degrade or erode the holistic approach characterizing the unique knowledge.

Indigenous knowledge itself is not a homogeneous knowledge body. Some practices can be contradictory between different communities. It demands us to develop as many locally adapted learning materials as possible.

This knowledge is sometimes shrouded by supernatural belief which restrict research by outsider. Nevertheless, what seems like the supernatural belief itself can conceal an unpredictable wisdom which usually underlie an aspect of indigenous.

Another curriculum development constraint will be intellectual property rights of this indigenous knowledge (International Seminar on Systems of Protection of Traditional Knowledge, 2000). As the selection and collection of the knowledge precedes and the database becomes public, there can be a conflict of who own the rights of the knowledge. The indigenous people should have a right to get the benefit of commercial application resulted from their knowledge.

Chapter VI **Conclusion**

The curriculum of the open and distance education for the indigenous people must include indigenous value and wisdom which is vital to the sustainability of the whole environment despite over increasing development process.

The integration of indigenous knowledge into education must be proceeded by selection and collection of the knowledge. The selection must be well balanced to conserve the knowledge amid contemporary context without disrupting their holistic point of view toward the environment.

Involvement of indigenous tutors can increase community participation and awareness of sensitive indigenous wisdom. They can also motivate indigenous people into the program.

The aim must be to enable indigenous people to survive and sustain amid modern & competitive age of progress.

UT can support a specialized open and distance learning program for indigenous people in junior secondary school age.

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