THE LOCAL WISDOM OF TENGGER TRIBE AS SOCIAL STUDIES LEARNING SOURCE TO DEVELOP ECOLOGICAL INTELLIGENCE OF JUNIOR HIGH SCHOOL STUDENTS

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Abstract

Tengger people owns a local wisdom in the form of ecological intelligence to minimize natural damage caused by the development of tourism in Bromo Tengger Semeru National Park. However, the inheritance process of these values seem to be hampered by the current wave of globalization. Education, specifically social studies subject has a big responsibility to internalize those noble values to the younger generation of Tengger. This article is a literature study related to the topic of local wisdom, Tengger people, its ecological intelligence, and social studies learning. From this study we can conclude that Tengger community possesses a unique way in the form of local wisdom in managing its land, forests/woodlands, and water. These wisdom of ecological intelligence could be adapted as a social studies learning source in Junior High School particularly for grade VII in 2013 curriculum. However, a further research is needed to investigate the development of model and media of local wisdom-based social studies learning to improve other related skills of the junior high school students.

Keywords: Local wisdom, Tengger tribe, Ecological intelligence, Social studies

58
INTRODUCTION

Nowadays, Indonesia tourism industry develops rapidly and becomes a major driver of regional and national economies. This development occurs due to the increasing consumer demand of tourism. However, the tourism development seems gradually affect the social, cultural, economic, and environmental aspects of the people around the tourism area.

The tourism development seems to also affect the social, cultural, economic, and environmental aspects of the Tengger Tribe community. Generally, this community inhabits the slopes of Mount Bromo and Semeru that are included in the area of Taman Nasional Bromo Tengger Semeru (TNBTS) or Bromo Tengger Semeru National Park. TNBTS is currently one of the tourism attractions in East Java visited by many people each year. Tourists who come from outside of Tengger Tribe, both domestic and abroad, had a multiple side effect which impacted Tengger community social changes. There is also a big concern that tourism development in the area will cause damage to the natural environment regarding its location on the reservation area.

The problems and challenges to the Tengger natural environment are very complex. The intelligence which relies only on the intellectual abilities is not enough to overcome the complex challenges of life. One of the intelligence needed is ecological intelligence. Ecological intelligence is needed to understand the impact of human actions toward the environment (Supriatna, 2017). However, basically every group of community has their own unique culture which shows the local wisdom and contains philosophical values that are important in life. Those philosophical values become the basis for decision making in facing the problems. The philosophical values of the local wisdom are very crucial to be internalized to the community particularly to their younger generations. One of the effective ways in the internalization process is through the formal education.

Nowadays, the integration of local wisdom values is indispensable in the learning process at school. Similarly, in building students’ ecological competence, a learning approach which is relevant with the students’ conditions and situations is needed (Supriatna, 2017). Therefore, a contextual local wisdom-based learning is needed to connect the learning materials and the environmental issues closest to the students’ real life.
Social studies subject holds the responsibility to internalize the philosophical values from the local wisdom through the learning process in the school. It is related to the main goal of social studies learning, which is to instill the awareness of individual position, both the capacity as an individual or as a community member (Hutama, 2016). They are expected to have awareness that they could not live apart from the network of socio-cultural life around them. To achieve the goals, the learning material should have been developed based on the various potentials available in their surroundings. It means, the local culture that is available and close to the ongoing process of education is something that should be empowered and utilized.

In respect of the ecological intelligence, social studies subject also becomes the right subject to develop the ecological intelligence. Philosophically, Social Studies subject is integrated, value-based, problem-based, and contextual. Similar with the social studies subject, ecological intelligence is also integrated, value-based, and problem-based. Integrated, means that ecological intelligence combined intellectual, social, emotional, and naturalistic intelligence as well as put the empathy as a positive attitude toward the environmental preservation. Value-based, means that ecological intelligence is also characterized by the knowledge and awareness of the existence of good and bad values related to the good or bad deeds of human toward the natural environment. Problem-based, means that ecological intelligence acts as a response to solve the humanitarian problems including its impact to the natural environment. Contextual, means that ecological intelligence in solving the problem is adjusted or depended on the local situations and conditions including the socio cultural, demographical, and environmental conditions (Supriatna, 2017).

Based on the arguments mentioned above, Tengger Tribe community has a lot of traditions and cultures that are full of noble values and wisdom as a form of ecological intelligence. Therefore, this paper will analyze the local wisdom of Tengger Tribe community as Social Studies learning source to improve the ecological intelligence of Junior High School students.

METHOD

This article is a result of literature study by reviewing journals, books, and other references related to the local wisdom, Tengger Tribe, ecological intelligence, and Social Studies subject. The result of several
literature studies was used to identify the local wisdom of Tengger Tribe related to the ecological intelligence, then it was analyzed into the curriculum and Social Studies learning in Junior High School.

DISCUSSION
The Nature of Local Wisdom

The diversity of Indonesian culture is a great resource to build the nation. Every region in Indonesia must have its own uniqueness and contains local wisdom. Local wisdom derives from two words, wisdom and local. In general, local wisdom is defined as local ideas that are wise, full of wisdom, good value, embedded and followed by the community members (Qodariah, 2013; Musafiri, 2016; Umami, 2017; Anwar, 2017). Other names for local wisdom include local knowledge and local genius (Shufa, 2018). According to those definitions, it can be said that local wisdom is everything that is the potential of an area as well as the result of human thought and works that contain wise and prudent values that have been internalized, followed, and inherited from generation to generation by a group of people. Local wisdom becomes a characteristic which distinguishes one region to another.

Local wisdom is an idea arises and develops continuously in a community. Local wisdom is a conceptual idea lives within a community that is related to a sacred life up to a modest daily life. Therefore, the manifestation of local wisdom is in a form of knowledge, customs, rules/norms, languages, beliefs, folk songs, legends, myths, folklore, and daily habits (Tinja, 2016; Utari, 2016). In detail, Anwar (2017) explains that the scope of local wisdom can be divided into several scopes including local norms; community rituals and traditions and the meaning behind them; folk songs, legends, myths and folklore which usually contain certain lessons or messages that are only recognized by the local community; data information and knowledge gathered from community elders, traditional elders, spiritual leaders; manuscripts or holy books that are believed to be true by the community; the ways in which local community fulfill their daily life; tools and materials used for certain needs; and condition of natural resources that are commonly used in everyday life of the community.

Local wisdom is developed from social values that are sustained in the social structure of the community itself and functioned as identity, guidance, control, and signs to behave in various dimensions.
of life both in dealing with others and with nature (Utari, 2016). In Indonesian context, local wisdom is one of the cultural forms which is constructed by the ancestors of Indonesian people. Local wisdom contains noble values that could be used to develop the character of Indonesian people. However, on the other hand, globalization is constantly disintegrating the local culture of a community (Tinja, 2017). Therefore, the nation’s noble heritage can only be passed on through education.

**Local Wisdom in Social Studies Learning**

Globalization is constantly disintegrating the local culture of a community. The local wisdom in the learning process in a school becomes important as an effort to increase love to the culture in the surrounding environment. In addition, the implementation of local wisdom in the learning process is useful to improve the students’ knowledge and as a character building as well as to equip the students to face every problem outside of the school ground. Therefore, education is expected to achieve a meaningful learning with the principle of *think globally, act locally* (Utari, 2016).

Local wisdom-based learning material is very important and needed in education. Based on the development model proposes by Dick and Carey (in Tanjung, 2015), it is obvious that learning material should contain the information needed by the students. The noble values in local wisdom are important information for students’ character building. Thus, local wisdom-based education could provide students with knowledge, skills and behavior so they have a solid knowledge on the environmental situation and community needs according to the values/norms that apply in their areas. By using local wisdom-based learning material, the learning will be more contextual.

The importance of implementing local wisdom values in the learning could be studied from the Perennialism philosophy of education. Perennialism sees education as a very crucial process in inheriting cultural values so that it can be known, accepted, and internalized by the students. Perennialism views that the past is a life chain of human beings that could not be ignore (Effendi, 2011). Past is an important part of human time travel and has a powerful impact on present and future events. The values born in the past is an important thing to be inherited to the younger generation.
The basic theory of local wisdom implementation in the educational field is sociocultural theory by Vygotsky. Sociocultural theory is a theory which emphasizes that social environment could help the learning process (Lestariningsih, 2017). Sociocultural theory considers that society and culture could be used as sources of knowledge. Social habits, beliefs, values and languages are parts that form someone’s identity and reality. A person’s mindset is based on his/her socio-cultural background.

Concerning to the local wisdom in Social Studies learning, it is known that the studies of social studies include human, space, time, in which the three of them are dynamic when they are combined, although they are physically static (Qodariah, 2013). Due to its dynamic, social studies learning has very tight and complex materials since it learns about the human dynamics from time to time and space to space. Thus, the learning sources in social studies are not only from books, but also from the human behavior in the surrounding areas, and one of them is its local wisdoms.

Based on the above logics and prepositions, it could be realized how essential and urgent is the local wisdom-based social studies learning. The accommodation of local wisdom values in the context of social studies learning could be done by including those local wisdom aspects, from designing the learning program, implementing the learning, and carrying out the assessment toward the students’ learning results. The transformation of local wisdom values in social studies learning does not mean that it is indoctrinated the values contain in it, instead it is studied logically, critically, and analytically so the students are able to solve the problems they faced in reality.

**Ecological Intelligence**

Goleman (2010) states that ecological intelligence is human ability to adapt in an ecological environment where the human live. Ecological intelligence is an ability or competence possessed by the students in responding to the situation occur in their surroundings and applying it to their daily life. Furthermore, Gardner (2013) mentions ecological intelligence in a term of naturalist intelligence. According to Gardner (2013), naturalist intelligence is human ability in understanding the natural symptoms, showing ecological awareness and expressing sensitivity to the natural forms. Furthermore, Orr (as
cited in Ardiansyah, 2015) illustrates someone with ecological intelligence is characterized by ‘The ecologically literate person has the knowledge necessary to comprehend interrelatedness, and attitude of care or stewardship. Such a person would also have the practical competence required to act on the basis of knowledge and feeling’.

Supriatna (2017) argues that ecological intelligence is very crucial to be developed in the learning process since the school graduates would play the roles as: 1) agent of change in the community, that is agents who are responsible to develop the community’s behavior with knowledge, insight, attitude and behavior that upholds the sustainability, 2) agents who are aware of the limited natural resources and global warming issues, and 3) agents who are able to implement the ecological intelligence or ecopedagogical learning application in life.

The survival of human life in the future will depend on the ecological intelligence. In order to make the students acquire the ecological intelligence, a competence is needed to be used as an indicator of students’ achievement in understanding the ecological intelligence. Palmer and Neal (1998) explain that ecological competence in educational field could be acquired by developing the sensitivity, awareness, understanding, critical thinking, and problem solving related to the environmental problems, as well as forming environmental ethics. To support those ideas, Center for Ecoliteracy has developed a set of “core competence” to help young generation in developing and living in the sustainable community. This competence is related to the knowledge (learning to know), attitude (learning to be), behavior (learning to do) and the relationship with humans and the natural environment (learning to live together).

The Local Wisdom of Tengger Tribe as a Form of Ecological Intelligence

Bromo Mountain holds an important value for the survival of Tengger Tribe community. Tengger Tribe community believes that when they live a good life side by side with the nature, the nature will provide benefits for them (Nurcahyono, 2018). The local wisdom of Tengger Tribe community as an effort to harmonize with the natural environment is as follows:
a. Local wisdom of Tengger Tribe to the land
Tengger Tribe community shows respect to the land as manifested in the behavior of environmental wisdom in protecting the land in a form of customary law. This customary law is thoroughly established by all villagers in a forum about the prohibition of abandoning land or releasing the land to outsiders (Negara, 2010).

b. Local wisdom of Tengger Tribe to the forests (woods)
The attitude of Tengger Tribe community in maintaining the harmonization with nature is also reflected in the customary sanctions applied among the Tengger Tribe community for its residents who are caught for cutting down trees. Customary sanctions could be restitutive, where the residents are asked to replant the replacement trees in the felling location, and repressive customary sanctions by parading the violators around the village. Parading the violators is intended to give a social embarrassment to the violators so that they would no longer repeat their actions (Krisnanto, 2014).

For the residents who violate the provisions of cutting trees outside of the Bromo Tengger Semeru National Park area will only be given restitutive customary sanctions. The violators will be given customary sanctions to replant the replacement trees in the felling location. Meanwhile, for the residents who are caught cutting trees in the National Park area will be given customary sanctions to replant the replacement trees in the felling location (restitutive) and parading the violators around the village (repressive) by putting on the branches of the trees they cut in their neck (Kristanto, 2014).

c. Local wisdom of Tengger Tribe to the water
Similar with the forests, water source also need to be respected by the Tengger community. The embodiment of respect to this water source is reflected in the social and religious norms that lead to the formation of legal culture to conduct the protection of the water source. Those norms are manifested in the behavior of environmental wisdom in the forms of: (1) do not damage/cut down the plants around the spring, do not take the sand and grass; (2) reject pricing water as the water belongs to Mother Earth (Negara, 2010).
The Analysis of the Implementation of Local Wisdom Values in the Curriculum 2013 for Social Studies Subject

The curriculum of 2013 is designed to develop the students’ competencies in a whole including the knowledge, attitude, and skill aspects. Curriculum 2013 also indicates that the learning in school must emphasize on the aspect of meaningful learning experience and appropriate with the students’ interests and talents (Laksana, 2016). A meaningful learning can be realized by linking the learning materials to the closest world of the students, or commonly known as contextual teaching and learning (Utari, 2016). Considering the characteristics of students in each region of Indonesia differ one another, an identification of local wisdom factor is needed as an effort to bring the learning to be more contextual.

According to the study of Core Competence or Kompetensi Inti (KI) and Basic Competence or Kompetensi Dasar (KD) of Curriculum 2013 in the knowledge and skill aspects, the local wisdom values could be integrated in the Social Studies learning in Junior High School for grade VII with the details as follows:

Table 1. The Core Competences and Basic Competences of the 2013 Curriculum

<table>
<thead>
<tr>
<th>Core Competence</th>
<th>Basic Competence</th>
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<tr>
<td>KI 3. Understanding the knowledge (factual, conceptual, and procedural) based on the curiosity about science, technology, art, culture related to the phenomena and visible events.</td>
<td>3.1. Understanding the concept of space (location, distribution, potential, climate, and shape of earth’s surface, geology, flora, and fauna) and interaction between spaces in Indonesia as well as its impact to the human life in the economic, social, cultural, and educational aspects.</td>
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<td></td>
<td>3.2. Identifying the social interaction within spaces and its impact to the social, economic, and cultural life in the values and norms as well as the socio-cultural institutions.</td>
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<td></td>
<td>3.3. Understanding the concept of interaction between human and</td>
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KI 4. Trying, managing, and presenting in the concrete realm (using, analyzing, arranging, modifying, and creating) and in the abstract realm (writing, reading, calculating, drawing, and composing) according to the material learned in school and other sources with the similar point of view/ theory.

4.1. Explaining the concept of spaces (location, distribution, potential, climate, and shape of earth’s surface, geology, flora, and fauna) and interaction between spaces in Indonesia as well as its impact to the human life in the economic, social, cultural, and educational aspects.

4.2. Presenting the identification result on the social interaction in the space and its impacts to the social, economic, and cultural life in the values and norms as well as the socio-cultural institutions.

4.3. Explaining the analysis results on the concept of interaction between human and space which resulted in several economical activities (production, distribution, consumption, demand, and offer) and interaction between spaces for the sustainability of economic, social and cultural life in Indonesia.

Based on the table above, there are six relevant Basic Competence to internalize the values of local wisdom in the learning process. Those six Basic Competence are narrowed down into three main topics and 11 learning materials which according to the writer are relevant to be inserted with local wisdom values. In details, the main topics and learning materials of Social Studies that can be combined with local wisdom factors are presented below:
Table 2. The Main Topic and Learning Material

<table>
<thead>
<tr>
<th>Main Topic</th>
<th>Learning Material</th>
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<tbody>
<tr>
<td>Human, Place, and Environment</td>
<td>1. Location and Area of Indonesia (particularly material about the implication of the location of Indonesia to the economical, and socio-cultural life)</td>
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<td>2. Potential of Indonesian Natural Resources (particularly material about the utilization and preservation of Natural Resources)</td>
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<td>3. Indonesian Dynamics Population (particularly material about the Ethnics and Cultural Diversity)</td>
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<td></td>
<td>4. Indonesian Natural Conditions (particularly material about the implications of physical conditions of the area to the community life)</td>
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<td>5. Changes due to Between Spaces Interaction (particularly material about the human effort in facing the changes)</td>
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<tr>
<td>Social Interaction and Social Institution</td>
<td>1. Social Interaction</td>
</tr>
<tr>
<td></td>
<td>2. The Effect of Social Interaction to the Formation of Social Institution</td>
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<td></td>
<td>3. Social Institution</td>
</tr>
<tr>
<td>Human Activity in Fulfilling the Needs</td>
<td>1. The Scarcity and Human Needs (particularly material about the human effort in fulfilling their needs)</td>
</tr>
<tr>
<td></td>
<td>2. Economic Activity</td>
</tr>
<tr>
<td></td>
<td>3. The Roles of Science and Technology in Economic Activity</td>
</tr>
</tbody>
</table>

Local wisdom-based Social Studies learning is presented using scientific approach and applying *discovery-inquiry based learning*, *problem based learning*, or *project based learning* model. The implementation of learning model can be determined by the teacher to be adjusted with the learning material. However, in order to complete the basic competence, the teacher can, and even strongly recommended to use other approaches and creative models in accordance with the situation and condition of the students as well as the school culture.
Social Studies teacher has an authority to develop the Social Studies materials into the themes appropriate with students' needs as well as the situation and condition in the school environment. Local wisdom-based themes related to the ecological intelligence can be implemented in the classroom learning more real both by developing the learning resources and media (Supriatna, 2017). Learning can be conducted in the classroom by using various learning aids including movies, pictures, and audio recordings as well as printed materials containing local wisdom materials. Learning can also be conducted outside of the classroom through field visitation to the local wisdom area (Supriatna, 2017). Owing to those learning designs, students are able to acquire knowledge, awareness, and skills to practice their ecological competence in the daily life.

CONCLUSION

The development of tourism in Bromo Tengger Semeru National Park or *Taman Nasional Bromo Tengger Semeru* (TNBTS) area has a potential to bring negative impacts to the quality of surroundings environment. Tengger Tribe who resides in TNBTS area in reality has their own local wisdom values to anticipate the environmental damage. The local wisdom values that can be categorized as a form of ecological intelligence become important to be inherited to the next generation. Formal education (school) is a crucial medium to internalize those values from the early stage.

Social Studies subject in junior high school level plays an important role to the internalization of ecological intelligence of Tengger Tribe in the educational world. The noble values of the local wisdom are aligned with KI and KD of Social Studies subject in Curriculum 2013 particularly in the affective skills aspect. Therefore, the local wisdom values of Tengger Tribe can be used as learning source in Social Studies subject in grade VII Junior High School through the integration of learning material in order to develop the students’ ecological intelligence. In addition, a deeper research on the development of model and media of local wisdom-based Social Studies leaning is needed.
REFERENCES


