

THE IMPLEMENTATION OF EDUCATION FOR SUSTAINABLE DEVELOPMENT IN THE LOCAL ECONOMIC RESOURCE DEVELOPMENT COURSE: TOWARD SMART VILLAGE FOR AGRICULTURE IN SLEMAN REGENCY

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ABSTRACT

The implementation of Education for Sustainable Development (ESD) in the course Local Economic Resource Development in Wonokerto Village, Sleman Regency aims at understanding the concept of ESD and training in preparing participatory action plans. The action plan was focused on Smart Village for Agriculture through website development, Instagram, landmark establishment, YouTube registration, and training on Website and Instagram management. The selection of the action plan was started by preparing the regional profile by means of observations, interviews, and focus group discussion. The participants of FGD were the community, village officials, youth groups, village enterprise (Bumdes), students, ESD Team and resource persons. By synergizing them, the implementation of lectures through the application of ESD can provide experience to students in understanding the real conditions and problems in the field and solving them together with the community. Besides, benefits can also be learned by the local people through the development of smart village for agriculture.

Key words: Education for Sustainable Development, Local Economy, Smart Village

INTRODUCTION

The Development of Local Economic Resources constitutes an optional course at the Study Program of Regional Development, Department of Development Geography, Faculty of Geography, Universitas Gadjah Mada. In this course, besides the material on concepts, methods and study techniques of cases are also given. One of them is in the form of training on composing action plans related to the development of local economy. In composing action plans, the students have so far implemented them through simulation. Through the grant of Education for Sustainable Development (ESD), they are able to do the practice of composing action plans in a participatory way in the village where the study is implemented. They are expected to be able to learn directly from real field cases along with the community. On the other hand, the community can also get benefits from this study-together process. The realization of ESD in the course Development of Local Economic Resources was implemented in the village of Wonokerto, Sub-district of Turi, Regency of Sleman, Special Region of Yogyakarta, where most of its people earn their living doing farming activities, especially planting *Salak Pondoh* (Snaky Fruit). Meanwhile, the purposes of implementing ESD in the course Development of Local Economic Resources through farming activities of *salak-pondoh* agriculture toward Smart Village for Agriculture in the respective village are: 1) to implement the concept of ESD in the course development of Development of Local Economic Resources, and 2) to do ESD-based course activities by composing action plans in a participatory way toward Smart Village for Agriculture. Previously, the realization of ESD in a course was once implemented in the course Urban Management through community

studies in Green Kampongs of the city of Yogyakarta (Rachmawati, 2014). Such an activity is regarded the most effective learning method in giving the comprehensive material on *Urban Management* since the students were able to learn directly from community in relation to self-environmental management (Rachmawati, 2014). In addition, they were also able to learn about the roles of community figures and leadership as well as form of effective communication in environmental management (Rachmawati, 2015).

LOCAL ECONOMIC ACTIVITY PROFILE OF STUDIED VILLAGE

Salak-pondoh plantation is very dominant in nearly all areas in the village of Wonokerto. Besides, there are two tourism attractions called *Wisata Bumi Perkemahan* located in Garongan and *Wisata Alam* located in Tunggularum, managed by both the village administration and local people. However, if both tourism attractions are managed in a more professional way, this will boost the tourism industry that is related to activities of *salak-pondoh* plantation that is very prospective as an economic activity of local people.

In 2009, the Regional Agency for Agriculture stipulated three sub-districts as an intensive cultivation for *Salak Pondoh*, namely sub-districts of Turi, Tempel, and Pakem. This stipulation is based on the fact that the three regions produce *Salak Pondoh* the most if compared to the other regions of the regency. According to the Badan Pusat Statistik (BPS / Central Bureau of Statistics) of the Regency of Sleman (2013), the sub-district of Turi has the largest number of *Salak-Pondoh* productive plants, i.e. 2,212,555 clumps producing 255,893 quintals of *Salak Pondoh*, meaning at the average of 11.57 kg/clump.

The village of Wonokerto is one of the four villages in the sub-district of Turi that is considered as the largest number of *Salak Pondoh* producing area. This shows that *Salak Pondoh* has a promising prospect to cultivate and that it needs to be marketed both in the forms of fresh fruit and processed products, such as crackers, *wajik* (rhomboid shapes), *bakpia* (fruit pie), *dodol* (porridge), etc. Meanwhile, the product reaches up to 1,588 quintals in 2012 (BPS of the Regency of Sleman, 2013).

In the context of production, *Salak Pondoh* was found abundant during the big harvest in the village where this study was conducted. Because *Salak Pondoh* is considered an agricultural produce that is easily spoiled, most farmers sell their *Salak Pondoh* to the nearest collecting merchants. local. Such a potential needs to be balanced with the growing creativity of local people in processing *Salak Pondoh* through the local economic empowerment. Thus, this will increase the duration of *Salak Pondoh* itself and the selling price of it through various processes. Therefore, this will also be able to improve the economic condition of the farmers in the area. In the activity of ESD, the potency of enterprise development of *Salak Pondoh* through an action plan that is composed in a participatory way is also going to be studied.

THE IMPLEMENTATION OF THE COURSE EDUCATION FOR SUSTAINABLE DEVELOPMENT

According to Balai Penyuluh Pertanian Kecamatan Turi (Center for Agricultural Counseling) of the sub-district of Turi (2014), *Sleman's Salak Pondoh* has been widely marketed through cooperation with modern supermarket *Carrefour* and has also been exported to China.. This will be expected to be increase the living standard of the *Salak-*

Pondoh-producing farmers. However, not all farmers in fact understand the marketing procedures so that they only sell it to the nearest collecting merchants. It is suggested that the marketing process should make use of technology like internet to enlarge the marketing network of *Salak Pondoh*. The use of technology needs also be accompanied with the education of using ICT-based media to community in order that they are able to make use of ICT independently toward Smart Village for Agriculture. Several important aspects in LED are information, communication and co-operation, innovation and increasing competitiveness (Zwannenburg & Fransen, 2006). It can be done through Interfirm relations, particularly in clusters or business agglomerations, government role through regulations, policies, and services, also public-private cooperation (Zwannenburg & Fransen, 2006). In this case the aspects of information and communication are part of an important element in developing local economic resources.

The benefit of implementing the activities of ESD in the course Development of Local Economic Resources through the agricultural activity of *Salak Pondoh* toward Smart Village for Agriculture in the village of Wonokerto is that it is expected to support the efforts of reaching Sustainable Development Goals (SDGs) and to encourage the spirit of UGM in implementing the curriculum containing ESD. The method of conducting this course is shown in Table 1.

Focus Group Discussion is done along with the related communities in potency and problem mapping. However, the students have done field observation before to obtain the description of village profile and its problems (Figure 1). Students also practice to actively participate in the FGD with community (Figure 2). In the FGD session, resource persons from both UGM, a lecturer specializing in agriculture, and the Agency Head for Agriculture of the Regency of Sleman are also present to give their view of the subject.

Table 1. Method of Implementing the Course

Subject Matter	Target	Learning Method	ESD Implementation
Elements of local economic development	Students are expected to comprehend the elements of local economic development	Lecture and Discussion	Concept of ESD in the development of economic resources
Development of Local Economy through UKM (Usaha Mikro Menengah / Small Medium Enterprises)	Students are expected to be able to comprehend the profiles of regions and local economic activities	Field Activities	Students learn from field condition by collecting data of region profile of the studied village and profile of activities of agricultural economy of <i>Salak Pondoh</i> .

Regional Analysis and Local Economical Activities	Students are expected to be able to make analysis on region and local economic activities	Presentation and Discussion	Students present the result of field learning process related to profiles of region and community's economic activities
Composing action plan in a participatory way	Students are expected to be able to compose action plan in a participatory way	Field activities	Composing action plan in a participatory way through field activities by conducting <i>focus group discussion</i> with the community from the studied village
The formulation of the result of analysis and action plan	Students are expected to be able to present the result of analysis and action plan	Presentation and discussion	The presentation of the result of action plan, findings, and result of analysis and action plan toward <i>smart village for agriculture</i>
Implementation of <i>action plan</i>	Students are expected to be able to assist and motivate the villagers to participate in the implementation of action plan.	Program implementation in the <i>action plan</i>	Students implement the action plan toward smart village for agriculture



Student Observation Activity at Salak Pondoh Plantation



Interview of Students at Salak Pondoh Trader

Figure 1. Survey in the Study Area to Get an Overview of Village Profiles and Community Activities of Salak Pondoh Farming



Figure 2. Students Practice Doing Focus Group Discussions with the Community

The survey and FGD results show that Wonokerto Village has approximately 23 *Salak Pondoh* Farmer Groups. The international market demand for *Salak Pondoh Super* is quite high. Delivery can be up to 5-10 tons per shipment, for example to Cambodia. Local marketing covers Jakarta, Bandung and Bali. The marketing of *Salak Pondoh* has reached the domestic and export markets abroad such as China and Singapore by cooperating with private partnerships. Marketing of *Salak Pondoh* products can be developed more widely by utilizing online marketing. The facilities provided by the government are quite numerous, including various kinds of training for farmers, cultivation support tools, assistance for farmers/ farmer groups, marketing, stimulant funds from the government.

ACTION PLAN AND ITS IMPLEMENTATION

The presence of information and communication technologies (ICT) has somewhat carved out an alternative path to development in Afrika, such as the use of new medium for economic change through the use of internet (Nirmala et.al., 2012). However, the use of gadgets in most countries Africa is constrained by the costs of purchasing and maintaining it much more expensive for them when compared to situation in the West (Nirmala et.al., 2012). This is one reason why the internet will take a long time before being vital communicative media in Africa (Nirmala et.al., 2012).

In preparing the action plan for the development of the smart village for agriculture, it also prioritized the use of ICT. By accommodating the results of the FGD, several programs will be implemented in the action plan in order toward *Smart Village for Agriculture*, namely: 1) development of the Village Website, 2) development of Instagram accounts, 3) creation of YouTube accounts, 4) making landmark Smart Village for Agriculture in Wonokerto Village, and 5) socialization and training on making and managing websites and Instagram. All of the program close linkage with the use of ICT. Even so, it is possible that obstacles can occur due to the ability of some people in the village and farmers of *Salak Pondoh* who still have limited ownership of gadgets and access to the internet and other uses of ICT. At least there are village governments, community leaders, village youth or ICT movers in the village who are able to own and use it.

The realization of action plan is implemented by: first, inaugurating the landmark of Smart Village for Agriculture and declaring the village of Wonokerto as a Smart Village for Agriculture, second, uploading the video of the inauguration of the landmark of Smart Village

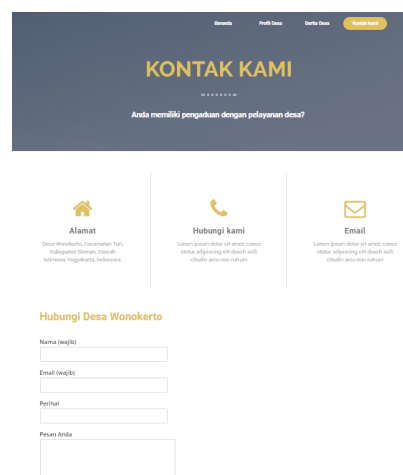
for Agriculture and the declaration of the village of Wonokerto as a Smart Village for Agriculture on YouTube, as well as uploading the video on the potency the village possesses, and third, monitoring the management of website and instagram. The results of action plan are shown in Figure 4.

Previous research has examined about the digital small medium enterprises (SMEs) kampong of Omah Salak located in the village near with the location of the study with community activities which also as Salak Pondoh farmer. The village is designed to be an information center for farmer groups and has developed into a place for tourism study, by introducing technology to *Salak Pondoh* farmers so that they can help and introduce internet use for product promotion (Rachmawati *et al.*, 2018). Utilization of ICT in Omah Salak Kampong such as the web, Facebook and Instagram is used by farmer groups to share information so that products can be promoted in a much faster way to use the internet (Rachmawati *et al.*, 2018). The take- up of e- business by SMEs needs to be seen as a means to an end and not an end in itself and tempered with a more realistic view of how small firms operate (Taylor and Murphy, 2004).

The marketing socialization by making use of a means of communication is expected to be able to help the local community market the existing processed products of their own. The module on the Making and Managing Website is intended as guidance to help community of *karang taruna* (youth community) of Wonokerto village in making and managing Website of Wonokerto Village. Through social media, it is expected that the potency found in Wonokerto village can be seen publicly so that they are interested in visiting and finding out the village as a smart Village for Agriculture. Indirectly, it is expected that the developmental growth for the village, especially in agro tourism, can be realized.. The development of the landmark of Smart Village for Agriculture in the respective village is intended to socialize the Village of Wonokerto as a Smart Village for Agriculture and that it will become an attraction for various tourism activities in the region.



Front page of Website of Wonokerto Village



Website pages of Wonokerto Village



Instagram account of Wonokerto Village



Landmark Smart Village for Agriculture Desa Wonokerto

Figure 3. Results of Action Plan

CONCLUSION AND SUGGESTION

Through the activity of synergizing the course and the application of the concept *Education for Sustainable Development* (ESD), it is expected that students will get experience in implementing sustainable education. Another benefit is that students will really understand the real conditions and problems on the field and along with community they are expected to be able to solve them. Meanwhile, composing action plan can also be done through a direct practice on the field, usually done through simulation. Continuation can also be reached by delivering the results of composing the action plan and its realization to community in order that other activities will follow. It is suggested that ESD activities in the respective region be continued for optimum result.

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