

The Application Of Society 5.0 Community Service In Kulon Progo District

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Received: December 5th 2020; Revised: September 15th 2021; Accepted for Publication September 16th 2021; Published: September 16th 2021

Abstract — Academic community service (KKN – kuliah kerja nyata) normally involves on-field activities and interaction between students and local communities. The emerge of covid-19 pandemic led to social distancing, a less ideal situation for on-field community service. Meanwhile, the advance of information technology brought society toward the fifth era. At this situation, the concept of society 5.0 was applied on community service conducted in Kulon Progo district, Yogyakarta. Programs dedicated to improve local community were arranged without direct contact with community members, but utilizing online information to identify the potentials in the location under study and challenges faced by the community. Through literature study, proposed improvement on the potentials and solutions for the problems were developed. The results were presented as ebook or video offering educative and informative contents that can be beneficial for community empowerment.

Keywords — community service, society 5.0, educative content, Kulon Progo.

I. INTRODUCTION

Community service is an education method that gives learning experience for student among society outside the campus, to directly identify and take a hand on problems faced by society [1]. It takes place in the society and requires people participation so it could give benefits to society. The programs arranged should empower community to solve the existing problems in the local area of community service. Furthermore, it should develop collaboration between government, industry, and community groups related to research and service. It should encourage innovation to improve life quality, provide problem solving, and suitable to community needs.

Academic community service (KKN – kuliah kerja nyata) is usually carried out on-field, involving direct interaction between students and local communities. The program arranged for community service is multidisciplinary, including knowledge from different fields. From economic perspective, community empowerment program was developed through apprenticeship to overcome the unemployment problems due to lower literacy rate, in order to promote the creation of sewing business entrepreneurs [2]. In another project, training in accounting was provided for senior high school students to encourage young entrepreneurship, in the view of increasing economic prosperity in regional area of Deli Sedang regency [3]. Related to environmental issues, a community empowerment program was carried out to overcome the problems related to chemical fertilizers and domestic wastes using discussion,

outreach, and counselling [4]. The output was processed products with potential to increase income. A program was also conducted in Ambarketawang village to provide training and assistance for women farmer group to process household waste into a packaged liquid fertilizer [5].

Earlier in 2020, coronavirus disease-19 (covid-19) emerged and quickly became a pandemic, impacting live activities worldwide. This novel coronavirus is structurally related to the virus that causes severe acute respiratory syndrome, and it posed serious challenges for public health [6]. This situation led to social distancing policy and work-from-home situation, to avoid infection spread. Academic community service, which was normally involved on-field activities and direct participation between students and community members, had to find a new form or to be conducted in different way. At this condition, the concept of society of 5.0 could be applied. Programs dedicated to improve local community were arranged without direct contact with community members. Instead, information from internet was retrieved to identify the potentials and problems faced by the community, followed by a program development. Due to pandemic, face-to-face interactions are restricted, and substituted by communication through internet platforms.

Society 5.0 is about creation of cyber-human society in which daily lives will be surrounded by and in collaboration with systems of artificial intelligent. Initiated in Japan, this idea proposed the increased quality of human life through digital technologies powered by internet [7, 8]. Today's economic activity is highly influenced and even depended on internet technologies, involving smart machines, advanced analytics, and people [9]. Because of mobile phone, internet has now become more accessible. In 2019, 62% of Indonesian population using mobile phone for internet usage and this number is expected to grow as much as 25% by 2025 [10]. The increasing utilization of internet may imply that people are getting familiar with this system. This means opportunity to spread knowledge, information, and educative contents beyond geographical border. Community service, generally identical to a direct, on-field counselling and training, is now possible to be conducted on-screen, utilizing information technology.

In this paper, an application of community service in society 5.0 setting is described, along with its potential benefits. Few example programs related to economic and environmental issues were highlighted. It provides examples of how a community service can be conducted in digital age, as well as introducing a new approach of KKN. This can be a

useful way to deliver contributions toward society in pandemic situation which hampers social interaction.

Programs dedicated to empower local community can still be developed by providing valuable knowledge and education in informative and interesting mediums such as ebook and video. It can be an alternative for on-field KKN which is arguably the gold standard of community service responsibility of academia on local communities. It provides flexibility since students could reside anywhere and still provide contribution to society. In society 5.0, the development of society, including social and economic dynamics, is closely related to data-driven innovation [8, 9]. Therefore, this approach could contribute in establishing a platform for society 5.0 in the form of data and educative contents

II. METODE PENGABDIAN (HEADING 1)

Secondary data and literature study were applied in this study. The locations under study were Bendungan, Kulwaru, Karangwuni, Giripeni, and Temon Wetan. These villages were located in Kulon Progo district, Yogyakarta. Data related to the locations, including its potentials and community situation, was retrieved from internet, such as government website, online local news, and Google maps. The programs were arranged based on the local situation, so that it can provide a relevant impact and contribution. Most programs arranged were also based on the educational background of the students. The method is described in figure 1.

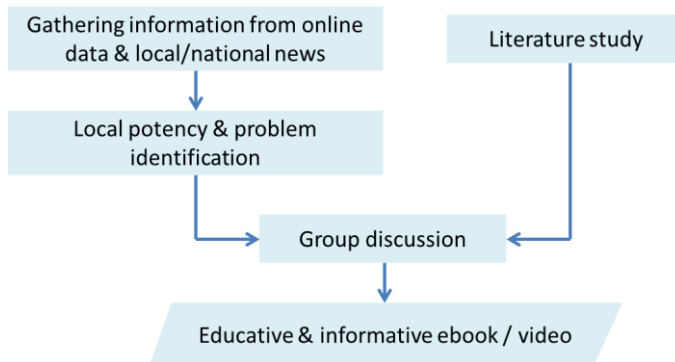


Figure 1. The method for community service 5.0

III. RESULTS AND DISCUSSION

The results of this community service 5.0 were ebooks and videos, where the examples are depicted in figure 2-8. The works presented in this paper are those related to both economic and environmental sectors. Most of economic activities in those villages are in agriculture, although each village also has unique potential. For example, enormous sand mines in Karangwuni, blacksmith industry in Bendungan and batik in Temon Wetan.

For Temon Wetan village, an idea was developed to arrange a simple video about accounting techniques for small enterprises. This is important since there are small enterprises that may take the advantage of accounting. The video contains basic knowledge on accounting, as well as some exercise to help the viewer to get better understanding

on the topic (figure 2). The video was informative and clearly presented, with interesting design touch to enhance the learning.

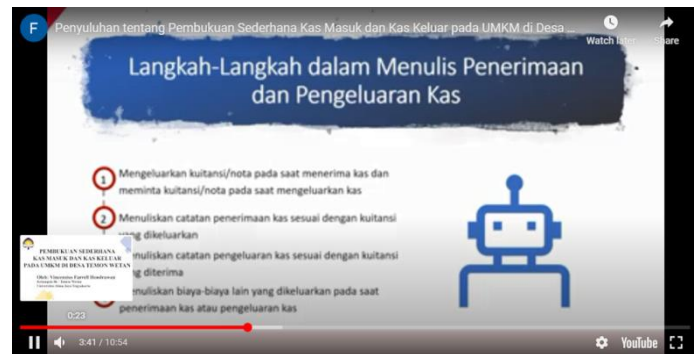


Figure 2. Video about accounting for small enterprises

Covid-19 has impact on economic, including unemployment. To help surviving this challenging situation, government aid is often required. Since 2019, Indonesian government created a program called kartu prakerja, purposed for decreasing the unemployment number. This program can be even more useful in the pandemic situation. To inform the local community about getting the advantage of this program, an ebook was arranged (figure 3). The content defines the kartu prakerja in a concise and informative manner, along with the requirement and steps to access this opportunity.

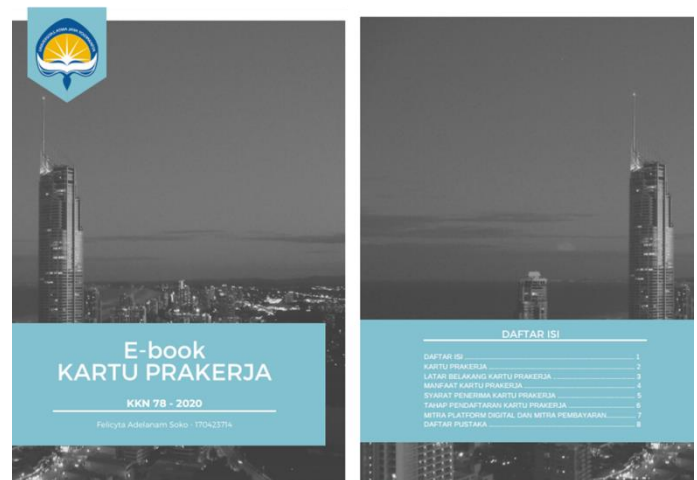


Figure 3. Ebook about kartu prakerja

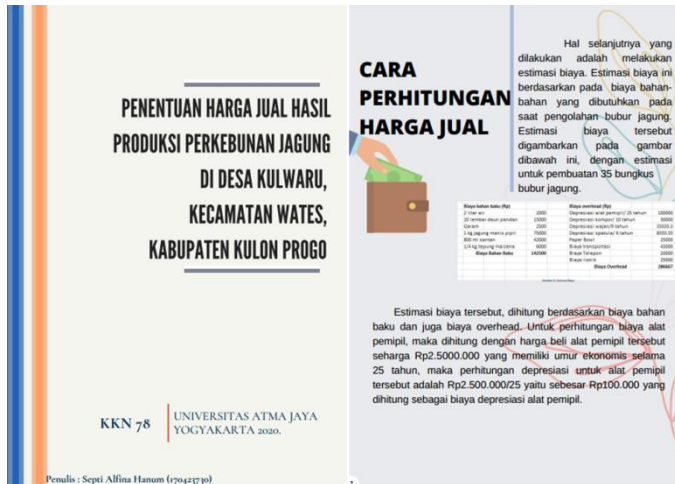


Figure 4. Ebook about the estimation of grits selling price

Kulwaru village is a corn producer. One of the corn-based products with economic potential is grits. In marketing, an estimation of selling price is important. For this, an ebook about the estimation of grits selling price of is arranged (figure 4). Step-by step calculation is provided with examples, from the raw materials preparation until selling price per product. This can be beneficial for those interesting to setup a small business related to grits. Besides it can be an example or guidance that applicable to estimate a selling price of any agriculture-based product.

In Bendungan village, one of problems faced by community is waste. To overcome this problem, waste can be processed into organic fertilizer. This type of fertilizer is considered more environmental-friendly, without risks of soil and waterways contamination. Considering, that Bendungan is an agriculture-based village, the use of fertilizer can be even more advantegous. To facilitate it, a concise and easy-to-read ebook of organic fertilizer was written (figure 5). The content included the benefits of organic fertilizer along with the steps to its production.



Figure 5. Ebook about organic fertilizer

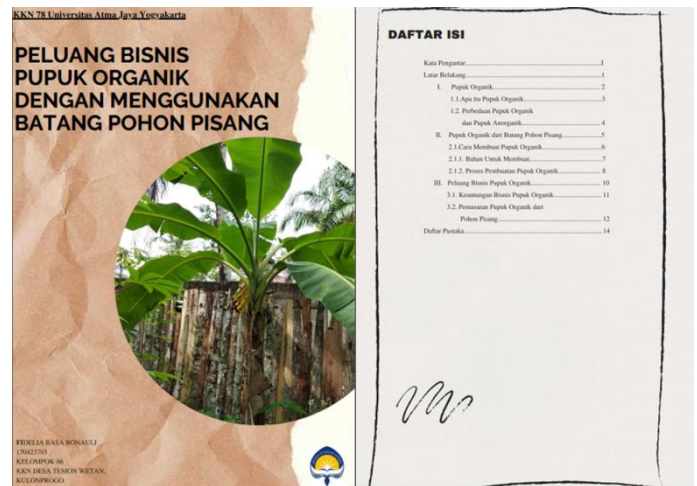


Figure 6. Ebook about organic fertilizer utilizing banana tree

Temon wetan region is dominated by various trees, including banana tree. Sometime after being harvested, banana tree decayed and can be a waste. The decayed tree can be still processed into an organic fertilizer. It can be a productive activity during 'stay at home' period due to pandemic and still offer financial benefits. An ebook about organic fertilizer utilizing decayed banana tree was arranged (figure 6), emphasizing the procedure of making the fertilizer. Furthermore its economic benefits were explained, along with the marketing strategy.

Besides natural and human resources, culture can also be considered as a potential. Bendungan village has a blacksmith culture, as evidenced by the existence of blacksmith activities. As an effort to conserve the culture, an ebook about blacksmith is written (figure 7), mainly purposed for the youngsters. The ebook contained the techniques for blacksmith works, from preparation of furnace until the testing of the product. With a casual design and less formal approach, the ebook is expected to gain the attention of youngster to participate in the conservation and development of blacksmith culture and industry. This program did not only offer potential benefits in economic perspective, but from human resource and cultural point of view.



Figure 7. Ebook about blacksmith works

The digital academic community service serves same purposes with the on-field approach. It differs only in terms of the interaction involved. Both offer solutions to the problem and challenges that exist in the local community. In the future, mentoring through online class should be arranged, facilitated by government and education institution, as well as industries and organizations. Future community service may also address issues related to information technology and its infrastructure, therefore providing a building block to welcome the era society 5.0.

IV. CONCLUSION

Educative and informative ebooks and videos were produced to provide valuable information and educative contents for local communities in the assigned locations. The outputs were derived from the actual condition of the location, thus could be beneficial to community empowerment by providing inputs and alternative solutions to the problems. These ebooks and videos should be then delivered to the community. Considering the emerge of society 5.0, next community service programs should accommodate contents about application of internet, artificial intelligence, and related technology. Direct communication through online platforms should also be established to obtain clearer situation of the location under study and to deliver the training and counseling more effectively.

ACKNOWLEDGEMENT

We would like to thank students of KKN 78 Universitas Atma Jaya Yogyakarta in group 86 – 90 for the hardwork and dedication, also LPPM Universitas Atma Jaya Yogyakarta for coordinating the society 5.0 community service.

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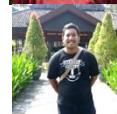
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