



Development of Education Facilities Based on Food Security as Agro-tourism through Community Empowerment in the Banyubiru Village, Banten

Heni Pujiastuti

Universitas Sultan Ageng Tirtayasa

E-mail: henipujiastuti@untirta.ac.id

Rudi Haryadi

Universitas Sultan Ageng Tirtayasa

E-mail: rudiharyadi@untirta.ac.id

Article History:

Received: May 13th 2022

Revised: Aug 17th 2022

Accepted: Nov 30th 2022

Keywords: educational vehicle, agro-tourism, food security.

Abstract: *The purpose of community service activities is to improve the economy of the Banyubiru village community by making the Banyubiru village a resilience-based agro-tourism village. The method of implementing this activity was through the development of an educational vehicle, namely a maze of maize vehicle, a tomato picking vehicle, a hide-and-seek vehicle, a fishing mania vehicle and an animal feeding vehicle. All of these rides are carried out with community empowerment through mentoring and counseling. The method of implementing this activity is carried out using the learning community approach. The subjects of this activity were only selected by 50 communities, namely 25 men and 25 women. All of them are over 20 years old and less than 50 years old. The results of the implementation of community service activities indicate that there is an increase in community economic income. This can be seen from the addition of tourists in the past month. Every week the number of tourists rises 5%, from the number of visitors there. The response from tourists was 87% from the results of the interviews we had done. The results of tourist responses show very good results for tourists who visit. Furthermore, the results of observations on food security awareness of 75%, this means that the villagers are included in the good category and already know how to manage natural resources into agro-tourism villages based on food security.*

Introduction

Banyubiru Village is a village located in the Labuan District area of Pandeglang Regency, Banten Province. The boundaries of the Banyubiru Village are the north bordering Babadsari and Pejamben villages, the south bordering Banyumekar village, the west bordering Caringin and Pejamben villages, the east bordering Tenjolahang and

Babadsari villages. The following picture of the location of the village of Banyubiru can be seen in Figure 1 below.¹

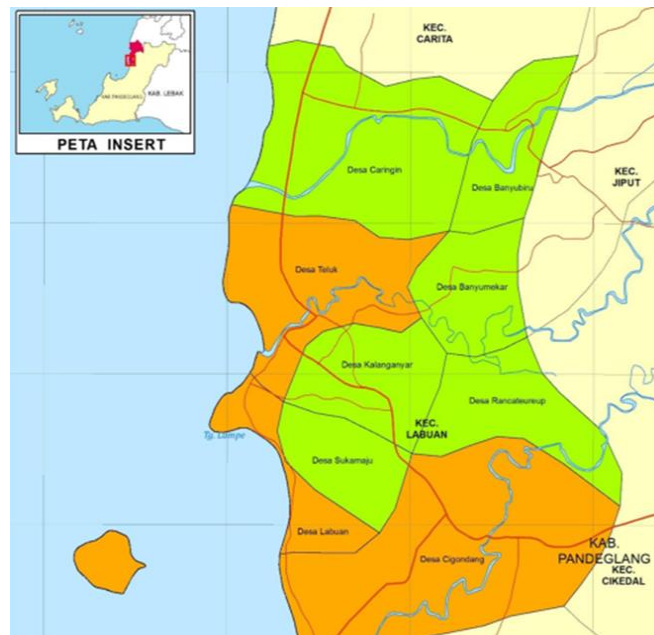


Figure 1. Banyubiru Location

Banyubiru tourism village is a small village that since the last five years was created as a tourist destination for the citizens of Banten. Banyu Biru Village offers an unforgettable experience for tourists by bringing the concept of a clean and beautiful rural atmosphere and presenting a calming expanse of rice fields and the friendliness of its citizens who do not hesitate to greet any tourists who visit.² Starting from the ideals of the local people who want to develop their potential the abundant nature, we as a team of Higher Education Community Empowerment Program (PPMUPT) in collaboration with the village head of Banyubiru held a Community Service activity (PPM) to develop the Banyubiru tourism village into an agro-tourism village.

Through PPMUPT activities carried out efforts to improve Human Resources in the form of training, guidance, assistance and provision of skills to villagers (in the form of community empowerment) to manage their natural and cultural potentials, so the results can truly improve the welfare of the surrounding community. In addition, this effort to empower the Banyubiru Village community can overcome the problem of poverty and unemployment in the region. This is in line with the results of the implementation of agro-tourism activities, that the development of agro-tourism villages can improve the community's economy by empowering the community itself.³

¹ Bupati Pandeglang, "Peta Lokasi Pandeglang," <https://Petalokasi.Org/Kabupaten-Pandeglang/Taman-Desa-Wisata-Banyubiru>.

² Bupati Pandeglang, "Desa Banyubiru," <http://Banyubiru.Desa.Id>.

³ Ahmad Badrut Tamam, "Pengembangan Agrowisata Berbasis Komunitas Melalui Program Edukasi Wisata Dan Entrepreneurship Menuju Kemandirian Ekonomi Masyarakat," *Engagement* 04, no. 01 (2020):

In order to support the development of agro-tourism villages, Banyubiru village now has community groups that are fostered, including: Community Empowerment Institutions (LPM), Youth Organization, Family Welfare Empowerment (PKK), Farmer Groups, Gapoktan, and Posyandu. Furthermore, the activities carried out in the PPMUPT program are by paying attention to aspects of food security which is a central theme in the Sultan Ageng Tirtayasa University Service Plan (Untirta) to the community and raised forward in regional development.⁴ Attention to food security is absolutely necessary because it is closely related to social security, economic stability, political stability at all times. In addition, in the case of agro-tourism development carried out in the PPMUPT program is part of the Regional Medium-Term Development Plan (RPJMD) of Pandenglang Regency, especially in terms of developing Banyubiru Village as an agro-oriented tourism village.⁵

Efforts to develop rural agro-tourism villages that utilize the potential of nature conservation, agriculture, plantations and involve rural communities, can function as community empowerment.⁶ The development of agro-tourism villages is based on the paradigm of community-based tourism which emphasizes on increasing the participation and participation of the community, especially the community around the village.⁷ In the development of agro-tourism villages, the local community is one of the most important components in addition to the role of the government and the private sector.⁸ The local community as the host who knows the ins and outs of the area is an implementer or subject in the development of an agro-tourism village.⁹

The purpose of the PPMUPT activity is to improve the economy of the Banyubiru villages' community by developing various attractions for educational facilities that can support agro-tourism based on food security.

100-115.

⁴ Lembaga Penelitian dan Pengabdian Masyarakat UNTIRTA, *Rencana Induk Penelitian*, 2020.

⁵ Bupati Pandeglang, *Bupati Pandeglang Provinsi Banten Peraturan Daerah Kabupaten Pandeglang*, 2021.

⁶ Tamam, "Pengembangan Agrowisata Berbasis Komunitas Melalui Program Edukasi Wisata Dan Entrepreneurship Menuju Kemandirian Ekonomi Masyarakat."

⁷ Dwi Oktavallyan, Samsul Bahri, and Recky Yundrismein, "Pendampingan Pembuatan Desain Kawasan Pariwisata Berbasis Komunitas (Community Based Tourism) Pada Kelompok Sadar Wisata Di Kawasan Danau Gedang Kabupaten Bengkulu Tengah," *Engagement* 04 (2020): 76-86.

⁸ Mei Lina, Fitri Kumalasari, and Abdul Muhid, "Community Mentoring Through Efforts to Use the Waste of Cow Dung into Biogas and Organic Fertilizer towards Energy Independent Society," *Engagement* 04, no. 01 (2020): 1-13.

⁹ Hasyim Asy, "Pemberdayaan Desa Wisata Melalui Pengembangan Wisata Air Terjun Songgo Tuyo Di Desa Nogosari Kec . Pacet Kabupaten Mojokerto," *Engagement* 04, no. 01 (2020): 138-155.

Method

The subjects contained in the implementation of PPMUPT activities are the village community located in the location of the village of Banyubiru, Labuan district, Pandeglang regency, Banten province. The subjects in this activity were chosen by only 50 communities, consisting of 25 men and 25 women. Furthermore, the village community is trained and given learning about the development of a food security-based education vehicle in developing and transforming agro-tourism villages. Furthermore, the time for the service is carried out in February-March 2020.

The method used in the implementation of PPMUPT is the learning community approach or what is referred to as the learning community. Actually the concept of learning community is a technique where learning situations are created based on the concept of Contextual Teaching and Learning (CTL), where the learning process and results are obtained from the results of working together and collaborating with others.¹⁰ Learning outcomes are obtained from sharing between friends, between groups and between those who know and those who don't know.¹¹ The key words of the learning community are talking and sharing experiences with others, working together with others to create good learning compared to self-study.¹² Learning Community occurs when each party involved in it is aware that the knowledge, experience and skills possessed are beneficial to others, basically those involved in the learning community can be a source of learning.¹³

In learning community, group members involved in learning communication can learn from one another.¹⁴ This mutual learning community can occur if there is no dominant party in the communication, no party feels reluctant to ask, not party feels the need to know and want to listen to each other.¹⁵ Each party must feel that everyone else has different knowledge, experience or skills that need to be learned.¹⁶

The following design methods for implementing community service activities using the learning community approach used in this implementation can be seen in

¹⁰ Hongbiao Yin and Xin Zheng, "Facilitating Professional Learning Communities in China: Do Leadership Practices and Faculty Trust Matter?," *Teaching and Teacher Education* 76 (2018): 140-150; Deborah Carpenter Rn et al., "Using Learning Communities to Support Adoption of Health Care Innovations," *The Joint Commission Journal on Quality and Patient Safety* (2018): 1-8.

¹¹ Rn et al., "Using Learning Communities to Support Adoption of Health Care Innovations."

¹² Wanli Xing and Fei Gao, "Exploring the Relationship between Online Discourse and Commitment in Twitter Professional Learning Communities," *Computers & Education* (2018).

¹³ Karen A Theobald, Carol A Windsor, and Elizabeth M Forster, "Engaging Students in a Community of Learning: Renegotiating the Learning Environment," *Nurse Education in Practice* (2018).

¹⁴ Ramazan Yilmaz, "Computers in Human Behavior Knowledge Sharing Behaviors in E-Learning Community: Exploring the Role of Academic Self-Efficacy and Sense of Community," *Computers in Human Behavior* 63 (2016): 373-382.

¹⁵ Jeong Eun, "A Formative Intervention on Mobile Learning Community," *Procedia - Social and Behavioral Sciences* 191 (2015): 68-76.

¹⁶ Shan Li, Juan Zheng, and Yunfeng Zheng, "Towards a New Approach to Managing Teacher Online Learning: Learning Communities as Activity Systems," *The Social Science Journal* (2019).

Figure 2 below.



Figure 2. Learning community models

Furthermore, the educational facilities developed in the implementation of this activity can be seen in Table 1 below.

Table 1. Development of agro-tourism education vehicle based on food security

No	Educational Game	Activity
1	Corn maze	Training, piloting and development in community groups
2	Pick fruit	Training, piloting and development in community groups
3	Hide and seek	Training, making plans and community empowerment
4	Fishing mania	Training, piloting and development in community groups
5	Animals feeding	Training, piloting and development in community groups

Result

After completing PPMUPT activities, a maze of maize rides, fruit picking rides,

treasure exploring education vehicle, fishing rides, farm house rides.

A corn maze

The following sketch results have been made on making a maze educational vehicle can be seen in Figure 3 below.

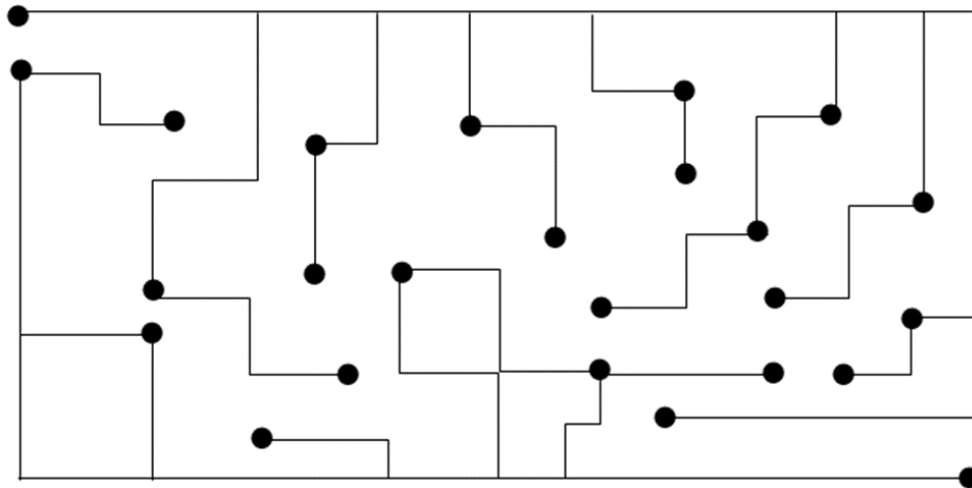


Figure 3. Sketch corn maze

A fruit picking vehicle

The following sketch results were made on making fruit picking rides can be seen in Figure 4 below.

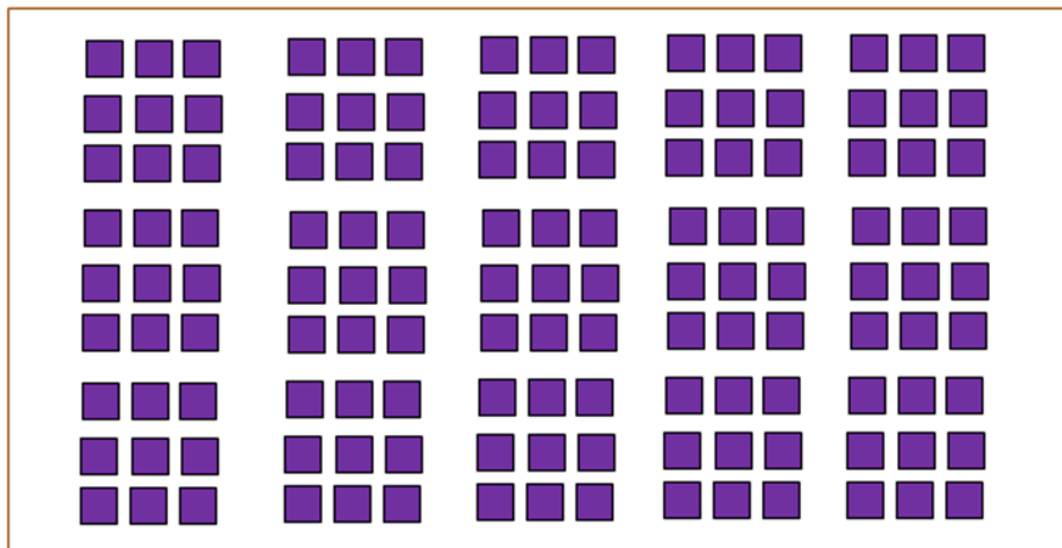


Figure 4. Sketch pick fruit

Vehicle tracking (Hide and seek)

The following sketch results made on the making of hide and seek can be seen in Figure 5 below.

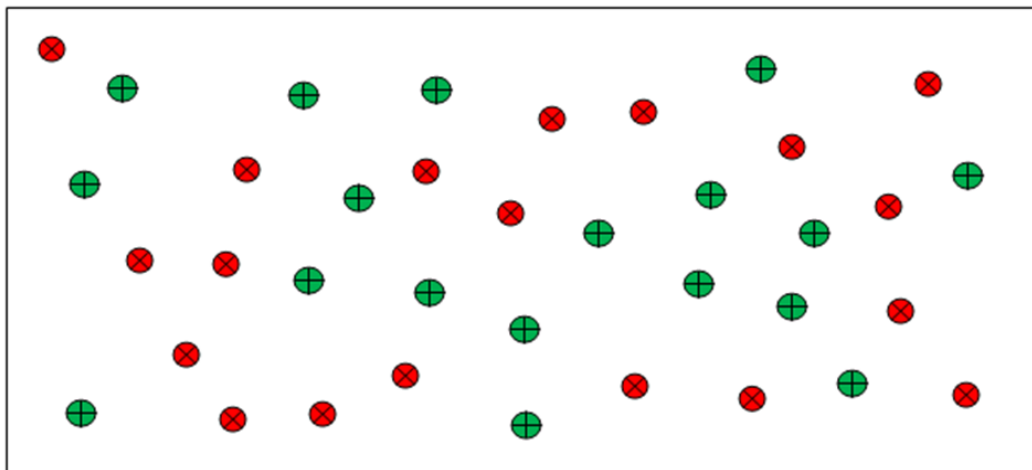


Figure 5. Sketch hide and seek

Fishing vehicle

Following the results of the sketch made on the fishing vehicle can be seen in Figure 6 below.

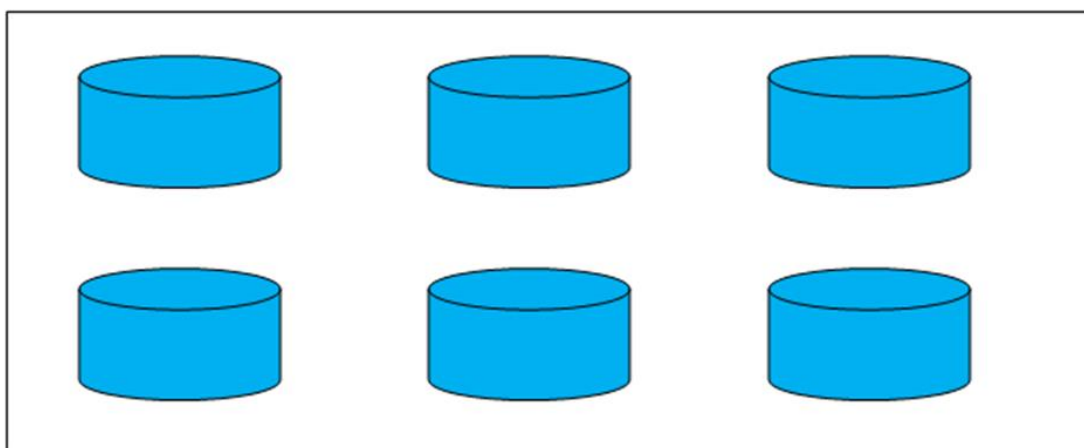


Figure 6. Mania fishing vehicle

Animal feeding vehicle

The following sketch results made on making animals feeding vehicle can be seen in Figure 7 below.

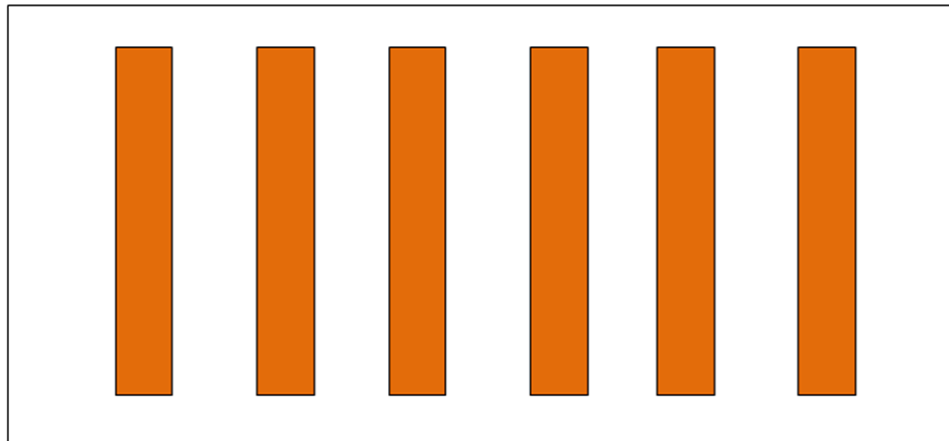


Figure 7. Animals feeding vehicle

Furthermore, the results of the response of the community and tourists to the agro-tourism village in the village of Banyubiru, Labuan district, Pandeglang regency, Banten province can be seen in Table 2 below.

No	Activity	Response of Village Community	Response of tourists
1	Corn maze	85%	90%
2	Pick fruit	80%	85%
3	Hide and seek	75%	90%
4	Fishing mania	85%	90%
5	Animals feeding	70%	75%

Discussion

In this PPMUPT activity, the villagers are invited to develop a food security-based education vehicle as a form to make the village agro-tourism. The villagers were invited to gardening accompanied by the PPMUPT team, this was done so that the division of the area of the development of the educational vehicle could be used to the maximum. Based on the results of the activities in Table 2 above it can be seen that the response of the village community and tourists is included in both categories. This means that in this PPMUPT activity, the village community is very interested in the planting of maize by the maze method. Of course this is something new for the village community.

Based on the results of interviews between the PPMUPT team and the Banyubiru village community, it was shown that the results of the sale of maize were better made for a labyrinth vehicle rather than being sold directly. Because in this vehicle, tourists

prefer fresh corn while circling the maze. In addition, profits taken by the community increased from ticket sales for the maze of maize vehicles. From the results of direct observation, tourists who enjoy this game are more liked by children.

In addition to enjoying the maze of maize rides, tourists are given the opportunity to plant corn seeds on land that has been provided. The tourists have already prepared clothes and other equipment to support planting corn. From this activity, tourists can learn firsthand how to plant corn in the garden.

Furthermore, tourists can also buy tomatoes on fruit picking rides. The tourists can immediately pick tomatoes by picking themselves while around the garden that has been planted by tomatoes. In the development of this fruit picking vehicle, the community is guided in advance how to plant good and right. This is done so that the plants picked are still fertile. The results showed that the tourists on these fruit picking rides showed satisfaction levels below the maze of maize rides.

Based on observations of these fruit picking rides, villagers can improve their economy through selling tomatoes with fruit picking attractions. Many tourists bring children to learn gardening with their own hands. Children can run happily while passing through a fresh tomato plantation.

Furthermore, roaming rides or hide and seek rides. Through forest exploration, the community is guided in advance to create a guide to explore for tourists. In this vehicle, the village community acts as a tour guide or facilitator in exploring the forest. Of course, this is advantageous for the village community with many tourists bringing children to fill their holidays. The income earned by the village community was obtained from ticket sales of hide and seek rides. The tourists are guided in exploring the forest, they at the beginning in exploring carrying seeds of manga trees to be planted. On the way they will find a gift or trap, this is in accordance with the name of the inheritance, hide and seek.

Based on the results seen in Table 2, it shows that the response of the community and tourists is in the good category. Villagers have learned how to use natural resources that can be used as a source of income. Of course, this can also increase or improve the economy of rural communities. Furthermore, the results of interviews with tourists showed a very good response. It can be seen in Table 2 that is 90%, meaning that the tourists are very entertained by the hide and seek ride.

Next on the fishing vehicle. In this vehicle, the PPMUPT team empowers existing rivers or irrigation. Fish is supplied to the community irrigation stream which is turned into a pond. In this fishing vehicle, not only a fishing vehicle is provided, but also a fishing vehicle is provided directly in the pool that has been provided. The community is guided in advance how to divide existing ponds. In this vehicle, the public can find out how to develop fish through PPMUPT activities.

Cultivation developed in this activity is the cultivation of catfish and carp. Judging from the results of fish farming, the community can add and experience an economic increase, plus the sale of angler rides, so the results of the community's response are very good. Then the response from the tourists was also very good. The tourists can directly fish on the fish that have been provided, and also the children of the tourists can take fish directly by catching it.

Finally, on the animals feeding vehicle. In this vehicle the community is given education on how to care for animals to be always healthy. At this stage, the vehicle developed is to feed animals and milk the cows. The community is given education on making innovative cages and attracts tourists. The results of the community response showed good results. This means that in this animal feeding vehicle, the village community is not accustomed to caring for animals. So far they only have gardening and farming.

The response of the tourists also showed good results. But these results are still below the results of other vehicles. This means that tourists are less enthusiastic about providing animals feeding rides. The results of interviews with tourists showed that they were not very comfortable with the scent in the animal feeding or farm house environment. This is our input from the PPMUPT team to always invite the village community to keep clean in the animal feeding area.

Conclusion

Based on the results and discussions at this PPMUPT activity, it can be concluded that the community's economy has improved with the arrival of tourists to try out educational vehicles in the village of Banyubiru. Besides enjoying the views of the village, tourists with their families and children can play while farming, gardening and raising livestock. The results of the response of the public and tourists also showed good results, namely 79% and 86%, respectively.

Furthermore, the implication of this activity is the development of a tourist village with other attractions, such as a vertical garden, aquaculture, hydroponic and home culinary industry.

Acknowledgements

On this occasion, we thank the Ministry of Research, Technology and Higher Education (KEMRISTEKDIKTI) for providing community service grants through the scheme of the Leading Higher Education Community Empowerment Program (PPMUPT).

References

- Asy, Hasyim. "Pemberdayaan Desa Wisata Melalui Pengembangan Wisata Air Terjun Songgo Tuyo Di Desa Nogosari Kec . Pacet Kabupaten Mojokerto." *Engagement* 04, no. 01 (2020): 138–155.
- Eun, Jeong. "A Formative Intervention on Mobile Learning Community." *Procedia - Social and Behavioral Sciences* 191 (2015): 68–76.
- Li, Shan, Juan Zheng, and Yunfeng Zheng. "Towards a New Approach to Managing Teacher Online Learning: Learning Communities as Activity Systems." *The Social Science Journal* (2019).
- Lina, Mei, Fitri Kumalasari, and Abdul Muhid. "Community Mentoring Through Efforts to Use the Waste of Cow Dung into Biogas and Organic Fertilizer towards Energy Independent Society." *Engagement* 04, no. 01 (2020): 1–13.
- Oktavallyan, Dwi, Samsul Bahri, and Recky Yundrismein. "Pendampingan Pembuatan Desain Kawasan Pariwisata Berbasis Komunitas (Community Based Tourism) Pada Kelompok Sadar Wisata Di Kawasan Danau Gedang Kabupaten Bengkulu Tengah." *Engagement* 04 (2020): 76–86.
- Pandeglang, Bupati. *Bupati Pandeglang Provinsi Banten Peraturan Daerah Kabupaten Pandeglang*, 2021.
- . "Desa Banyubiru." [Http://Banyubiru.Desa.Id](http://Banyubiru.Desa.Id).
- . "Peta Lokasi Pandeglang." [Https://Petalokasi.Org/Kabupaten-Pandeglang/Taman-Desa-Wisata-Banyubiru](https://Petalokasi.Org/Kabupaten-Pandeglang/Taman-Desa-Wisata-Banyubiru).
- Rn, Deborah Carpenter, Susan Hassell Ms, Russ Mardon, Shannon Fair Rn, Maurice Johnson Jr, Sari Siegel, and Mary Nix Ms. "Using Learning Communities to Support Adoption of Health Care Innovations." *The Joint Commission Journal on Quality and Patient Safety* (2018): 1–8.
- Tamam, Ahmad Badrut. "Pengembangan Agrowisata Berbasis Komunitas Melalui Program Edukasi Wisata Dan Entrepreneurship Menuju Kemandirian Ekonomi Masyarakat." *Engagement* 04, no. 01 (2020): 100–115.
- Theobald, Karen A, Carol A Windsor, and Elizabeth M Forster. "Engaging Students in a Community of Learning: Renegotiating the Learning Environment." *Nurse Education in Practice* (2018).
- UNTIRTA, Lembaga Penelitian dan Pengabdian Masyarakat. *Rencana Induk Penelitian*, 2020.
- Xing, Wanli, and Fei Gao. "Exploring the Relationship between Online Discourse and Commitment in Twitter Professional Learning Communities." *Computers & Education* (2018).

Yilmaz, Ramazan. "Computers in Human Behavior Knowledge Sharing Behaviors in E-Learning Community : Exploring the Role of Academic Self-Efficacy and Sense of Community." *Computers in Human Behavior* 63 (2016): 373–382.

Yin, Hongbiao, and Xin Zheng. "Facilitating Professional Learning Communities in China : Do Leadership Practices and Faculty Trust Matter ?" *Teaching and Teacher Education* 76 (2018): 140–150.