

EDUTOURISM AS AN EFFORT TO STRENGTHEN KELAN VILLAGE RESILIENT AND PRO-ENVIRONMENTAL TOURISM VILLAGE

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ABSTRACT

Kelan Tourism Village is located in Kuta District, Badung Regency, Bali Province, and has the potential for marine tourism and culinary tourism by utilizing sea products in the form of seafood as the main menu. This tourism potential is currently underway, but economically it has not yet had a maximum impact, as a result of the existence of complementary products in the form of vegetables to complement the seafood menu which are still purchased from outside the Kelan Tourism Village, even though the plantation area is still available. Based on these problems, the solution provided is the application of the Biofloc Aquaponics Integrated Urban Farming Model, Drip Irrigation Vegetable Garden Tilapia which is packaged as edutourism, targeting elementary school students, middle school students, tourists/visitors, and the Kelan Tourism Village community. The implementation of the solution shows that there has been an increase in understanding, knowledge and skills of the target groups, namely elementary school students, junior high school students, tourists/visitors and the community regarding Integrated Urban Farming Aquaponics Biofloc, Tilapia Fish Garden Vegetable Drip Irrigation. Apart from that, people involved in culinary tourism also experienced an increase in income, as a result of reduced purchases of complementary products in the form of vegetables that they were able to produce themselves, as well as strengthening environmental conservation.

Keywords: edutourism, pro-environment, urban farming, Kelan Tourism Village

INTRODUCTION

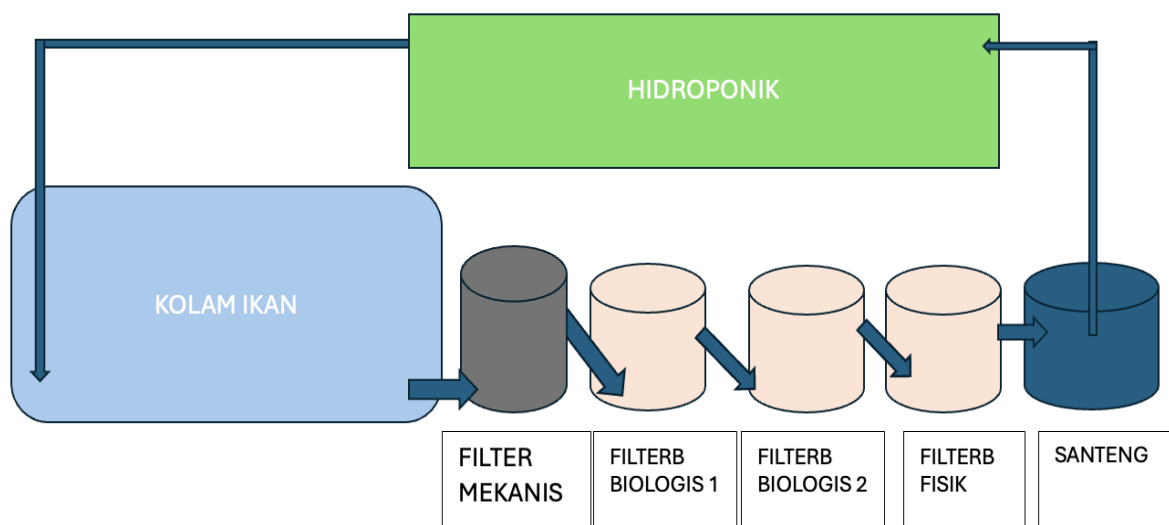
Kelan Tourism Village is one of the villages in Kuta District, Badung Regency, Bali Province, located to the south of Bali's I Gusti Ngurah Rai International Airport. Kelan Tourism Village has two *banjar*/hamlets, namely Banjar Kelan Desa and Banjar Kelan Abian. These two *banjar* are respectively led by the *kelian banjar adat*, the *penyarikan* and the *petengen banjar adat*. The Kelan Tourism Village is led by a traditional village head who comes from *krama ngarep*, with a term of office for each period of five years and can be re-elected in the next period. The vision of the Kelan Tourism Village is "to be able to prosper all its residents, both environmentally and economically". In 2023 Banjar Kelan Abian will have a total of 244 heads of families (KK) and Banjar Kelan Desa will have 201 families with the main livelihood of the population being fishermen and also as small farmers. The work as fishermen is to utilize marine products around the Kelan Tourism Village, while as farmers, people are active by gardening. There is still sufficient plantation area in Kelan Tourism Village, but the people are more focused on working outside the plantation so that the plantation potential is not exploited properly.

Apart from plantation potential, the Kelan Tourism Village also has the potential for marine tourism and culinary tourism by utilizing sea products in the form of seafood as the main menu. The tourism potential in the Kelan Tourism Village in the form of marine tourism and culinary tourism is currently underway, but economically it has not yet had a maximum impact as a source of income for the Kelan Tourism Village treasury. The economic impact of marine tourism and culinary tourism in the Kelan Tourism Village has not been maximized as a result of the existence of complementary products in the form of vegetables which are still purchased from outside the Kelan Tourism Village, where these vegetables are a complement to the seafood menu served to tourists or visitors who are visiting to enjoy it. Culinary delights at restaurants or eateries in the Kelan Tourism Village.

In the development of marine tourism, there is still a crucial problem that has not been addressed to date, namely the shipment of marine waste in the form of wood waste, twigs, including plastic waste. Apart from waste sent from the sea, Kelan Tourism Village also faces the problem of domestic waste from households and restaurant waste. Piles of rubbish are increasing in volume along with the increase in population, especially from immigrants whose numbers have exceeded the native population. Apart from having a positive impact on improving the community's economy,

this also has a negative impact, namely increasing the volume of waste. The problem of domestic waste in the Kelan Tourism Village, by the Mah Saraswati University Community Service Team in collaboration with Dhyana Pura University has succeeded in providing technology for processing domestic waste into Liquid Organic Fertilizer (POC). According to Prasiasa et al. (2023) problems faced by society provide space for universities to play a role in providing solutions through community education methods, training, science and technology substitution, and participatory decision making processes.

The problem is that plantations in the Kelan Tourism Village have not yet been fully exploited and the success of the Mah Saraswati University Community Service Team in collaborating with Dhyana Pura University in producing POC, implementing a solution in the form of "Urban Farming Model Integrated Aquaponic Biofloc, Tilapia Fish Garden Vegetable Drip Irrigation" as in Figure. 1.



Bioflok -Filter fisik – biologis – biologis – fisik (pasir genteng dll)

Figure 1. Urban Farming Model in Kelan Tourism Village

This model is used as the object of edutourism, while the subjects are the younger generation (primary and junior high school children), the community, and visitors/tourists to the Kelan Tourism Village. Thus, the focus of this research is the Edutourism Model of Urban Farming Integrated Aquaponics Biofloc, Tilapia Fish Garden Vegetable Drip Irrigation in the Kelan Tourism Village.

LITERATURE REVIEW

In the current era of modernization, tourist activities are no longer limited to traveling to relax and have fun. The concept of tourism has undergone a very broad and holistic evolution, including tourist trips that are able to provide learning, experience and insight to tourists/visitors. One form of tourism that is increasingly popular is edutourism, where visitors/tourists can enjoy a trip while learning about the cultural, historical, natural and social aspects of the destination they visit.

Bodger (1998) states that edutourism or educational tourism is a tourism program, with the main aim of gaining direct learning experiences related to the location visited. Educational tourism programs can take the form of ecotourism, heritage tourism, rural/farm tourism, community tourism and student exchanges between institutions. With the development of science, various ideas related to tourism activities are also increasingly developing. One activity in the tourism sector that is also developing as a result of developments in science is educational tourism (edutourism). The benefits of educational tourism, apart from enjoyment and satisfaction, are also to gain additional knowledge.

Apart from that, edutourism can be interpreted as travel or tourism which aims to provide learning experiences to tourists/visitors. The main aim is to inspire, educate and increase tourists/visitors' understanding of the destinations they visit as well as promote awareness of cultural and environmental diversity.

The characteristics of edutourism are: a) Interactive: emphasizes interactive experiences that involve tourists/visitors in learning activities. These can take the form of participatory activities that allow tourists/visitors to engage directly with the environment and local communities; b) Informal Education: is applying a more relaxed learning approach (unlike formal education). Tourists/visitors learn through direct experience and interaction with the surrounding environment, without any pressure from a formal curriculum; c) Various Topics: in edutourism a variety of topics are offered ranging from history, art, culture, and the environment and others. Tourists/visitors are free to choose topics according to their interests.

The benefits of edutourism include: a) Cultural Enrichment: through edutourism tourists/visitors can deepen their understanding of local culture and traditions. They can learn about the unique history, art of music, dance and language of a tourism destination; b) Environmental Education: edutourism can promote awareness of the importance of preserving the environment. Tourists/visitors can learn about various biodiversity, environmental problems and challenges, as well as sustainable practices carried out by local communities; c) Community Development: through participation in edutourism, tourists/visitors can make a positive contribution to the economy, strengthening the environment, and harmonizing relations between tourists/visitors and local communities.

Edutourism is the main educational paradigm in travel, as well as creating added value in society both in the form of improving education and creating new economic opportunities as a result of the knowledge gained during tourism activities. Edutourism will also provide a platform for learning without age differences. The concept of edutourism will gradually change with alternative educational methods offered in the form of educational tourism. According to Pusparini (2018) edutourism is a combination of the concepts of tourism and education which are packaged into an educational travel program carried out by individuals and groups.

Furthermore, according to Prasiasa and Widari (2024:27) developing tourist villages is the right and strategic step in overcoming changing patterns of tourist interest and boredom with the tourism products that have been offered so far. Apart from that, according to Prasiasa and Widari (2024: 34) the development of tourist villages is carried out using a sustainable tourism development approach, which emphasizes being economically viable, environmentally friendly, socially acceptable, and the application of technology.

METHOD

Assistance in the form of community service in the Kelan Tourism Village using the participatory action research method or participatory research, namely a combination of social research and educational work using the concept of participatory research in the context of historical materialist methodology (Aqsa, 2019). In the first stage, interviews were conducted with key informants (Kelan Traditional Village Leader, Chair of Pokdarwis, Kelian Banjar, PKK Women, and Representatives of Community Figures) regarding the potential and problems of tourism and plantations. In the second stage, based on the potential and problems of tourism and plantations, a solution was created in the form of "Aquaponics Biofloc Integrated Urban Farming Model, Drip Irrigation Vegetable Garden Tilapia". In the third stage, equipment related to urban farming was designed in the form of hydroponic and aquaponic installations. The fourth stage is the installation of hydroponic and aquaponic installations. Fifth stage, trial of hydroponic and aquaponic installations. The sixth stage, preparing seeds in the form of hydroponic plants/vegetables and tilapia fish seeds. The seventh stage, socialization of how to plant hydroponic vegetable seeds and distribute tilapia fish seeds, how hydroponic and aquaponic installations work, as well as how to provide organic fertilizer to hydroponic installations to the community (Pokdarwis members, PKK women, farmers, and community representatives). The eighth stage, in the form of assistance by the Mahasaraswati University Community Service Team in collaboration with Dhyana Pura University regarding the Biofloc Aquaponic Integrated Urban Farming Model, Drip Irrigation Vegetable Garden Tilapia Fish to the Kelan Tourism Village community in a sustainable manner. The ninth stage, involving elementary and middle school students in the Kelan Tourism Village and surrounding villages, took the form of introducing the Biofloc Aquaponic Integrated Urban Farming Model, Drip Irrigation Vegetable Garden Tilapia Fish.

RESULTS AND DISCUSSION

Edutourism is a tourism concept that focuses on educational and learning activities for tourists/visitors and local communities. This was expressed by Sharm (2015) that "Tourism today is one of the major global industries and an important source for economic growth and employment generation". This concept can be applied in tourist villages by utilizing village resources, such as natural, cultural and historical riches. For example, tourists can learn the process of making local products, such as handicrafts, traditional food, local culture, agricultural/plantation systems, and so on. Developing edutourism can provide many benefits, including: (a) by developing edutourism the tourism potential in villages can increase, so that it can attract foreign and domestic tourists; (b) local people can take advantage of this opportunity by selling local products, such as handicrafts, traditional food, and processed local products that are unique. This can increase the income and welfare of local communities; (c) developing edutourism can increase public awareness and education about the importance of preserving the natural, cultural and historical wealth of tourist villages.

One of the tourist villages that is the target of a community service program by developing edutourism in the form of Integrated Urban Farming, Biofloc Aquaponics, Tilapia, Drip Irrigation Vegetable Gardens is the Kelan Tourism Village. The development of edutourism in the Kelan Tourism Village can provide economic benefits for the local community. Tourists/visitors can see urban farming activities, meanwhile the results of urban farming in the form of vegetables will reduce household expenses or restaurant/food stall owners in buying vegetables. The savings in purchasing vegetables will increase the income and welfare of the local community, including increasing the income of restaurant owners/seafood restaurants in the Kelan Tourism Village. Tourists/visitors will be more interested in visiting the Kelan Tourism Village because apart from enjoying culinary seafood, they can also learn about how to garden in urban areas using hydroponic and aquaponic systems, where urban areas generally have very limited land for plantations. Apart from that, the benefits of developing edutourism for the Kelan Tourism Village community are very large, including helping the economy of the local community and increasing awareness of the importance of protecting the environment with all its potential. To be able to provide benefits to the community, the Kelan Tourism Village community is first given training in order to increase competency related to urban farming. The training activities are as shown in Figure. 2.



Figure 2. Urban Farming Training Atmosphere

The training provided by the community service team to partners (young generation, PKK women, Pokdarwis, and farmers) includes understanding organic gardens, understanding hydroponics, understanding aquaponic, understanding ecotourism, understanding organic gardening techniques. With an understanding of hydroponic and aquaponic techniques, partner competency was able to increase from an average of 20.6% to an average of 91%, as one form of the team's success in providing education to the community to create a strong and resilient Kelan Tourism Village community, independent in creating food independence. The competency achievements from the training that has been given to partners are as shown in Figure. 3.

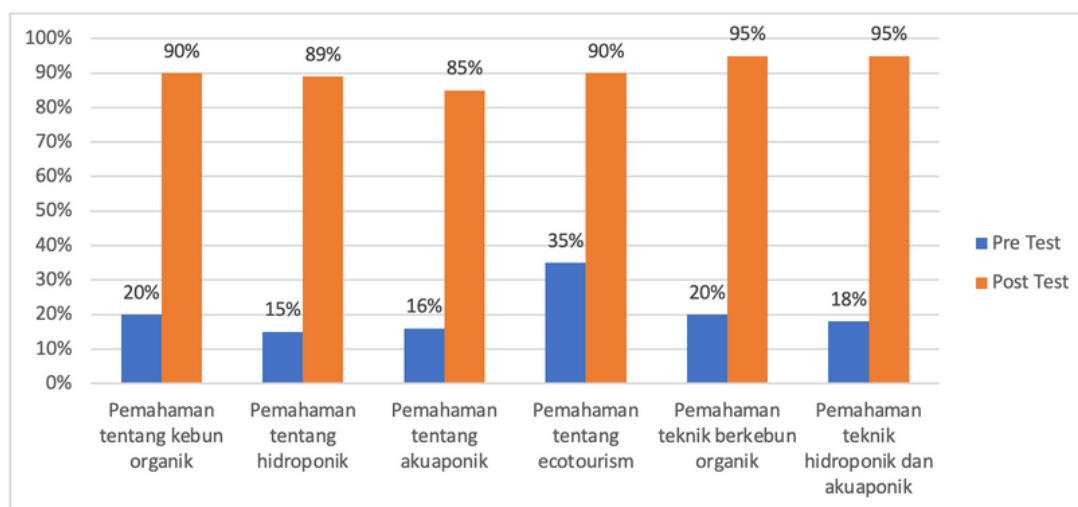


Figure 3. Partner Competency Achievements Before and After Training

Visits from local tourists, foreign tourists, as well as elementary and middle school students around the Kelan Tourism Village to urban farming locations, apart from enjoying seafood culinary delights, can attract the attention of other visitors to visit the Kelan Tourism Village, because these activities are published on social media. According to Smith (2013), the benefits of edutourism actually do not refer to local or national planning, local or national targets, but with edutourism local residents and even the world of education can be helped to preserve tourist villages as part of tourist destinations, especially the attraction of edutourism which is unique and contains sustainable principles such as the development of urban farming as a solution for urban plantations.

The activity invites visitors, in this case elementary school and junior high school students in the Kelan Tourism Village and surrounding villages, to see and learn gardening techniques using aquaponic and hydroponic systems as well as raising tilapia fish in ponds integrated with aquaponics, which is one form of developing edutourism in educational resources. In this edutourism program, tourists/visitors are not only invited to see firsthand the process of gardening using aquaponic and hydroponic systems, this activity is also aimed at forming character and developing skills from an early age. In a short time, visitors are invited to learn about urban farming and end with a very educational game.

The development of edutourism which is carried out by involving elementary school and junior high school students in the Kelan Tourism Village in the future is expected to attract the attention of tourists/visitors to visit the Kelan Tourism Village. The development of edutourism can also increase public awareness and education about the importance of education to improve the quality of life. Referring to the 17 Sustainable Development Goals (SDGs) targets, for Bali Province in particular: SDGs 2, namely the prevalence of stunting in 2023 of 7.2% and in 2022 of 8%; and SDGs 8, namely Bali's economy will experience an increase in 2023 by 5.71% compared to national growth which reached 5.05%. The development of edutourism in the form of an Integrated Urban Farming Model, Aquaponics, Biofloc, Tilapia, Drip Irrigation, Vegetable Gardens, is expected to make a positive contribution to improving SDGs 2 and SDGs 8 in Bali Province.

Elementary school students, middle school students and tourists/visitors to the Kelan Tourism Village are very enthusiastic about learning about urban farming in the form of hydroponics and aquaponics. Learning about urban farming in the form of hydroponics and aquaponics is carried out using classical methods. According to Sagala (2006) classical learning is the activity of delivering lessons to a number of students which is usually carried out by the teacher by means of a lecture. This classical learning model is applied by the Community Service Team in the Kelan Tourism Village in the learning process or introduction to the Biofloc Aquaponic Integrated Urban Farming Model, Drip Irrigation Vegetable Garden Tilapia.

Elementary school students, middle school students and tourists/visitors had the opportunity to try out the process of planting vegetable seeds grown in a hydroponic installation, received an explanation about how the integration between a hydroponic garden and a tilapia fish pond works, as well as techniques for harvesting hydroponic

vegetables. Apart from that, this edutourism also explains techniques for feeding fish, as well as techniques for providing organic fertilizer in hydroponic garden installations.

Edutorism programs need to be carried out and socialized to the younger generation (elementary school students, middle school students and visitors) because they have many benefits. According to Winarto (2016), the benefit of implementing educationalism is that tourists will gain direct experience from the objects they see directly; tourists participate in various activities so they can develop talents and skills; tourists can deepen and broaden their horizons; tourists can implement theory into practice; tourists can gain integrated knowledge and experience.

With several benefits from edutourism, for local communities in whose areas the Biofloc Aquaponic Integrated Urban Farming Model is being developed, Drip Irrigation Vegetable Garden Tilapia Fish will be able to open up new jobs. Apart from that, it will reduce the unemployment rate and increase the economic income of local residents. The benefits of edutourism can also increase people's interest in learning simple but useful skills to protect the environment in the area where the community lives. Apart from that, according to Fuady et al. (2020) and Heriyanto et al. (2020) edutourism can protect and preserve culture and customs. There are many areas that expose local wisdom which will later be used for tourism, both local and foreign, whose aim is edutourism. Therefore, edutourism programs can open the minds of local communities and become a new livelihood.

CONCLUSION

Edutourism in the Kelan Tourism Village is a paradigm of sustainable education in the form of community service. The program is produced using the observational needs analysis method, with the aim of creating added value in society in the form of increasing knowledge and skills and providing economic opportunities for the people in the area. Seeing the great opportunities that the Kelan Tourism Village has, especially from the availability of land to support culinary tourism, the implementation of the Integrated Urban Farming Model, Biofloc Aquaponics, Tilapia, Drip Irrigation Vegetable Gardens is a solution in order to support the development of the Kelan Tourism Village as a strong and prosperous tourist village.

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