

# Enhancing Student Skills through Family Medicinal Plants: A Community Service Initiative

**Faizatul Widat\*, Widiyawati, Siti Maysaroh Agustin, Syaviatur Rosi, Latifatun Nisa, Ummi Hani, Karina Nuria Rahman**

Universitas Nurul Jadid, Probolinggo, East Java, Indonesia

Email: [widat@unuja.ac.id](mailto:widat@unuja.ac.id)

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## ABSTRACT

### Keywords:

Student Assistance,  
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### \*Corresponding Author

This research focuses on the implementation of reforestation using Family Medicinal Plants (TOGA) as a reforestation solution, which has barren land. This research addresses serious problems related to dry land in the MI Azzainiyah II environment. This research uses a field research approach and uses qualitative descriptive methods. Data collection was conducted through interviews, participant observation, and documentation. The validity of the data is ensured through triangulation of data sources, which involves using multiple sources to obtain information, and triangulation of methods by comparing data from interviews, observations, and documentation. Data is analyzed through several stages, including data reduction, data display, and verification to conclusions. This research shows the positive impact of Family Medicinal Plants (TOGA) training on the knowledge and skills of MI Azzainiyah II students in caring for the school environment. The data collected shows a significant increase in students' understanding of TOGA after attending the training. This research aims to increase students' understanding and practical skills in TOGA farming, which can be applied directly in their surrounding environment.

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## INTRODUCTION

Integrating practical knowledge and experiential learning has become increasingly paramount in educational settings. In this vein, using Family Medicinal Plants, commonly known as Tanaman Obat Keluarga or TOGA has emerged as a promising initiative to enhance student skills and knowledge. The integration of TOGA within educational curricula presents a unique opportunity to nurture diverse skill sets while imparting valuable insights into traditional herbal medicine practices (ogas et al., 2021).

An innovative approach enriches academic learning and provides a hands-on experience for students to engage with nature, fostering a deeper

understanding of ecological sustainability and traditional healing methodologies (Orr et al., 2021). By incorporating TOGA into educational frameworks, institutions aim to equip students with practical skills, promoting a comprehensive understanding of the environment, cultural heritage, and the significance of herbal remedies (Süntar, I. 2020).

This paper delves into the efficacy of integrating TOGA as an educational tool, focusing on its impact on augmenting students' skills and competencies. By exploring this PKM (Program Kreativitas Mahasiswa) initiative, we aim to examine its influence on student learning outcomes, practical expertise in cultivating medicinal plants, and the broader implications for their holistic development (Rangachari et al., 2020). Through this exploration, we seek to underscore the multifaceted benefits of TOGA integration in education, emphasizing its role in nurturing well-rounded individuals with a profound appreciation for environmental sustainability and traditional knowledge (Ogar et al., 2020).

Enhancing Student Skills through Family Medicinal Plants: A PKM Initiative (Asif et al., 2021). This activity is a breakthrough regarding the introduction of herbal plants in the surrounding environment and a variety of Indonesian spices in early childhood directly with the aim of community activities in efforts to utilize herbal plants in the surrounding environment for self-medication naturally and free from chemicals as well as introducing spices as medicines and also seasonings for healthier and more nutritious food and drinks for young children who are still in the growth and development stage. This activity is expected to be a non-formal learning method to care more about health and be able to utilize Indonesian herbal plants and spices as medicines and additional ingredients for healthy and safe food and drinks, as well as increase the feeling of love for Indonesia's homeland which is rich in its natural resources (Farouq et al., 2022).

The geographical condition of Grinding Village, which is located in the lowlands or coast, is a significant problem for the MI Azzainiyah II school because there is no soil fertility in the MI Azzainiyah II schoolyard, which is located in Granting Village, considering the geographical location is in the lowlands or coast, no If have fertile soil, it is tough to grow plants and family medicinal plants (Ya-Na et al., 2020).

Family medicinal plants (TOGA) are nutritious plants planted in the yard and managed by the family. It is planted to meet the family's need for traditional medicines that they can make. This Family Medicinal Plant (TOGA) is starting to be noticed by some people in Indonesia. In line with this, Government Regulation Number 103 of 2014 concerning Traditional Health Services in Article 70 states that people can carry out health care independently and properly by utilizing Family Medicinal Plants (TOGA) (Azwar et al., 2022).

As for the use of TOGA, apart from being a medicine, it can also be used to (1) increase family nutrition (papaya, cucumber, spinach), (2) cook herbs or

spices (turmeric, galangal, ginger, lemongrass, bay leaves), (3) adds beauty (rose, jasmine, sunflower, hibiscus, periwinkle, cat's whisker). TOGA can be planted in pots or on the land around the house, and if the land planted is large enough, part of the harvest can be sold and increase family income (Anwar & Fitriana, 2021).

Based on the activities we have carried out, several things could be improved at MI Azzainiyah II, including the need for knowledge and use of family medicinal plants such as galangal, ginger and others. Many students still need to learn what family medicinal plants are. Apart from that, schools have very little plant media in the schoolyard.

With the lack of plants or vegetation in the schoolyard, this PKM will be very good for students at MI Azzainiyah II. One way to overcome this problem is to conduct reforestation or greening for students at MI Azzainiyah II.

Providing plants that function as medicines can also overcome the problem of the lack of supporting infrastructure such as pharmacies, nearby hospitals and so on (Atmojo & Darumurti, 2021). Apart from that, this can also be an alternative to overcome the weak purchasing power of the community and the soaring prices of modern medicines, which force the community and the government to look for ways to overcome this situation by returning to nature. This method is one of the most efficient ways to overcome health problems in the community (Vera & Yanti, 2020).

The use of plants as alternative medicines is also based on the high level of herbal medicines that are starting to be promoted among the public. Many herbal products are being developed and circulated among the public (Rulia et al., 2020). The increasing use of herbal medicines worldwide is inversely proportional to people's awareness of producing their own herbal medicines. The public widely consumes medicines derived from this plant. This is because the price is relatively cheaper and easy to obtain in the surrounding environment. Apart from that, people prefer medicines derived from plants because they have low side effects, mutually supporting effects with other traditional medicines, and are more suitable for various metabolic and degenerative diseases (Maulana et al., 2021).

One of the aims of this activity is to increase knowledge and understanding as well as the use of students at MI Azzainiyah II Grinting Village in managing surrounding plants. So, these widely grown plants benefit students and village communities as ingredients or family medicine.

## RESEARCH METHODS

The approach used by researchers is descriptive qualitative, which is research that aims to systematically describe the facts found in the field, verbal, sentences, phenomena, and not in the form of numbers (Dyar et al., 2022). Qualitative research prioritizes the disclosure of what is explored or expressed by respondents, and the data collected is in the form of words, images, and not

numbers. In other words, qualitative methods are research procedures that produce descriptive data from written or spoken words of observed people and actors (Khoa et al., 2023).

This study's data collection techniques included interviews, participant observation, and documentation. The interviews were used to gain in-depth insights. Participant observation is essential. Meanwhile, data collection is also carried out through documentation, including written recordings. Data triangulation was carried out by combining the results of these three data collection techniques to ensure the accuracy of the information and a comprehensive understanding of Enhancing Student Skills through Family Medicinal Plants.

In data analysis, this study followed several stages. First, data reduction is done to organize and simplify the information collected from interviews, observations, and documentation (Mezmir et al., 2020). Then, the data is presented visually or in tabular form to facilitate understanding. The final stage involves verifying the data's accuracy and validity before conclusions are drawn. This process allows researchers to explore findings from multiple viewpoints and ensures that the information generated is consistent with the various data sources (Amaya et al., 2021).

## RESULTS AND DISCUSSION

Probolinggo City is a city in East Java Province, Indonesia. Located about 100 km southeast of Surabaya, Probolinggo borders the Madura Strait to the north and Probolinggo district to the east, south and west. Probolinggo is the fourth largest city in East Java after Surabaya, Malang and Kediri; according to the population of this city in 2021, it is 242,246 people. This city is located in the horseshoe area, East Java and is the main route to the north coast that connects the island with the island of Bali.

Randutatah Beach is located about 40 km east of the city of Probolinggo and not far from the location of the Java Power PLTU. In 2012, Jawa Power and the YTL\_Jawa\_Timur team observed at Randutatah Beach and saw abrasion from sea waves that erode the shoreline yearly. It was recorded that in 1967, one of the hamlets, namely Grinting Hamlet, was lost due to coastal erosion. Apart from that, in 1971, a significant flood resulted in Patukangan hamlet being submerged in water so it could no longer be inhabited, and the hamlet residents finally moved to the south side, which borders the village Randumerak.

Grinting Village is located on the coast; the coast is the area between land and sea, where land and sea meet. Landward includes parts of land, both dry and submerged in water, which are still influenced by the properties of the sea, such as tides and sea breezes, and saltwater immersion. Meanwhile, the sea includes parts that are still influenced by natural processes that occur on land, such as sedimentation and freshwater flows.

Based on a survey conducted by the service team from the Islamic Education Management study program at Nurul Jadid University at MI Azzainiyah II, Grinding is a village located on the coast. From the survey results, the village's land is sandy. Most students do not know about the presence of preservatives, sweeteners, colourings, emulsifiers and other dangerous chemicals in the food they consume every day. Young people also did not know when the PKM team asked about the names and benefits of several herbal plants, including turmeric, lemongrass, galangal, and ginger. Herbal plants are plants that are very beneficial for health and can be used as a learning vehicle for young children to get to know Indonesia's natural wealth, which is our pride and should be implemented for them so they can preserve and love Indonesia more with its diversity of natural resources through the PKM program, with the activity title "Student Assistance Through Family Medicinal Plants at MI Azzainiyah II" (Herowati & Azizah, 2021).

A location survey is the initial stage of a series of community service activities, which aims to observe and confirm the implementation location and activity targets. Based on the results of the location survey and discussions with the teachers at MI Azzainiyah II, it was used as a place for socialization and implementation of training.

### **Enhancing Student Skills through Family Medicinal Plants**

At the socialization stage, participants were given material about TOGA plants, examples of TOGA plants, how to plant them, and how to care for them. Socialization was carried out by the PKM team through presentations using PowerPoint media. The socialization activities for family medicinal plants at MI Azzainiyah II went smoothly. Before implementation in the field, coordination was first carried out with the School Principal as a partner in socializing medicinal plants. Apart from that, several types of plants with medicinal properties were also prepared in polybags, including lemongrass (bramakusu), turmeric (yellow), and ginger (goraka), and activity banners were made.

During the counselling, the participants who attended were from grades 4, 5 and 6; MI Azzainiyah II students were enthusiastic about participating in the socialization activities. After the socialization activities, we continued planting and handing over family medicinal plants at MI Azzainiyah II. Then, we held a photo session with KKN students and MI Azzainiyah II students, as shown in the image documentation. Family medicinal plants are one of the local wisdoms of the community in the health sector. The introduction and use of TOGA began during traditional society and became an oral tradition, and indigenous knowledge passed down from generation to generation and reached urban communities (Ternate, 2021).

People believe that using traditional medicines such as herbs from ginger rhizomes, turmeric, ginger, or galangal can increase the body's immunity. Family medicinal plants are plants cultivated by the family (home) with medicinal

properties. TOGA planting can be done in pots or on land around the house, and if the land planted is large enough, then some of the harvests can be sold and increase the family's income (Anwar, 2021).

At the start of the activity, all students in grades 4, 5 and 6 filled out a questionnaire about their knowledge regarding TOGA and the known types of medicinal plants. Next, the students were given material by KKN students in the form of a presentation about TOGA. In this session, students were introduced to several types of TOGA and their health benefits. The TOGA types presented are the plants most often encountered in everyday life. After the material was presented, an interactive discussion was held containing several types of medicinal plants explained, followed by gardening together.



**Figure 1. The practice of making medicinal plants**

Several TOGA plants were planted while gardening. After gardening together, the students filled out a second questionnaire containing the same questions as the initial questionnaire. The results of filling out the questionnaire are used as a benchmark for whether community service activities can increase students' knowledge about TOGA. Gardening together to plant TOGA provides a new experience for students and reminds them of the type of TOGA they are planting. Besides planting TOGA, planning is also carried out according to the local and scientific name of the TOGA being planted (Ariani et al., 2020).

The results of filling out the questionnaire show an increase in the understanding of students in grades 4, 5 and 6 at MI Azzainiyah II regarding the definition and types of TOGA. Apart from that, the activities can make them feel their love for TOGA Indonesia. This activity teaches students the definition of TOGA, types of TOGA, and its benefits. After students were given information about yoga through presentations and interactive discussions, they became more aware of the definition of TOGA. The introduction of TOGA by KKN students was delivered as an exciting presentation. Interactive discussions between KKN students and students also run effectively so that students quickly understand the definition of TOGA.

## CONCLUSION

The conclusion that can be drawn from this service activity is that the implementation of TOGA planting training activities has positively impacted students' abilities and skills in the field of TOGA management. MI Azzainiyah II students can understand various types of TOGA and their benefits to increase their knowledge of TOGA plants. Apart from that, students become skilled at planting and cultivating TOGA. This is important considering that the natural resources at the MI Azzainiyah II school could be much higher in plants supporting TOGA cultivation. Through the development of TOGA, the community will experience great benefits, namely family medicinal plants, which are cheaper than chemical drugs; planting and maintaining these plants is relatively easy, and the conditions at MI Azzainiyah II are very suitable for TOGA planting. By carrying out this service activity, the plant potential at MI Azzainiyah II can be developed and utilized optimally.

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