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Community Empowerment through Islamic Education-Based Thematic KKN: Integration of Education, Health, Economy, and Environment in Denai Kuala Village, Deli Serdang, North Sumatra

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ABSTRACT

Community empowerment is a form of higher education service that aims to increase community capacity through the use of local potentials and needs. Denai Kuala Village, Pantai Labu District, Deli Serdang Regency has community potential that can be developed through strengthening educational, health, economic, and environmental aspects. This activity aims to optimize the empowerment of the Denai Kuala Village community through the implementation of Thematic Real Work Lectures (KKN) which are integrated in these four fields. The implementation method uses a participatory and educational approach through observation, identification of needs, coordination with the village government and the community, program implementation, mentoring, and evaluation. Educational programs include Maghrib Mengaji, teaching activities at SDN 105338 Denai Kuala Village, memorization of short surahs, and anti-bullying education. Health programs include Posyandu for the Elderly and Toddlers as well as healthy gymnastics. Economic programs are carried out through the manufacture of brooms and creative piggy banks, while environmental programs include mutual cooperation, mosque care activities, village sign making, and decoration of the village head's office. The activities involved children, pupils, toddlers, older adults, cadres, residents, and village officials. Attendance was more regular than before the program, for example in Maghrib Mengaji (10–11 of 11 children per session, compared with about five children who studied the Qur'an around the post before the program) and in the Posyandu for the elderly (43 compared with 35 per session), and the program received positive responses from parents, the school, cadres, and village officials; long-term impacts remain to be evaluated. Community empowerment needs to be carried out in an integrated manner by placing the community as the subject of development and supported by continuous collaboration between the village government, the community, health cadres, educational institutions, and universities.

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Introduction

Village development is essentially not only oriented towards the development of facilities and infrastructure, but also on improving the quality of human resources and the ability of the community to manage their potential (Soekanto, 2017). The community needs to be placed as development subjects who have the ability to recognize problems, determine needs, make decisions, and be involved in the process of solving problems in their environment. Therefore, community empowerment is one of the important approaches in encouraging the creation of an independent, participatory, and sustainable society. This approach places villagers as the main actors in identifying problems and designing development solutions independently (Anwas, 2011).

Community empowerment at the village level needs to be carried out comprehensively because community problems in general are interrelated (Ministry of Home Affairs of the Republic of Indonesia, 2020). Aspects of education, health, economy, and the environment cannot be seen as stand-alone fields. Improving the quality of education can support people's knowledge and skills, good health conditions support productivity, strengthening the economy can increase community independence, while a healthy environment is an important part of creating the quality of life of the community. Research on community empowerment in Batu Putih Village shows that improving the quality of human resources can be done through strengthening education, health, economy, and the environment in an integrated manner (Hindaryatiningsih et al., 2024).

In line with this, (Purnomo & Mohamad, 2020) shows that community empowerment activities through KKN can be directed to the health, environment, education, and creative economy sectors. The development of programs in these various sectors allows the potential of the community and village problems to be handled more comprehensively. The results of these activities also show that the KKN program can produce educational activities while providing real benefits to the community and the village environment (Jumiyati et al., 2025).

Real Work Lecture (KKN) is a form of university service that allows students to interact directly with the community (Drafting Team, 2026). Through Thematic KKN, students not

only apply the knowledge gained in higher education, but also play a role as facilitators in identifying the potential and needs of the community. The implementation of Thematic KKN can cover various fields, including the environment, health, education, productive economy, and community development. The success of the program is also influenced by collaboration between students, supervisors, village governments, the community, and other stakeholders (Rochaendi et al., 2024).

Based on the results of observation and identification of community conditions, Denai Kuala Village, Pantai Labu District, Deli Serdang Regency has potential that can be developed through empowerment activities oriented to the needs of the community. Therefore, the implementation of Thematic KKN is directed at four main areas, namely education, health, economy, and environment. In the field of education, activities are carried out through Maghrib Mengaji, teaching at SDN 105338 Denai Kuala Village, memorizing short surahs, and anti-bullying education to strengthen children's character (Nurfadhillah et al., 2021). In the health sector, optimization of community services is realized through the implementation of healthy gymnastics and the Posyandu for the Elderly and Toddlers (Widyastuti & Triyono, 2023). Meanwhile, increasing the added value of the economic sector is carried out through assistance in making brooms and creative piggy banks (Sembiring & Tarigan, 2022). The environmental field is realized through mutual cooperation activities of the village head's office, mosque care, making village signs, and office decoration to increase residents' awareness of village facilities (Setiawan et al., 2026).

The implementation of the program is not only oriented towards completing activities during the KKN period, but is also directed to encourage community participation and increase awareness of the potential of the village. In addition to the main program, socio-religious activities such as recitation or wirid (perwiridan), deliberations in schools, hamlets, and villages, as well as several incidental activities are also carried out as a form of adjustment to the needs of the community during the activity. Thus, Thematic KKN becomes a collaborative space between students and the community in developing various aspects of village life in an integrated manner (Purnamasari et al., 2024).

Based on this description, this activity aims to optimize the empowerment of the people of Denai Kuala Village, Pantai Labu District, Deli Serdang Regency through strengthening education, health, economy, and the environment. The strengthening of these four fields is expected to contribute to increasing community participation and support the creation of

village communities that are more independent, healthy, productive, and caring for the environment.

Method

The method used in this activity is a descriptive method with a participatory and educational approach in the implementation of Thematic KKN in Denai Kuala Village, Pantai Labu District, Deli Serdang Regency, North Sumatra. The data used is in the form of primary data obtained directly from the community and the village environment as well as secondary data obtained from information from the village government and related parties. Data collection is carried out through field observation, identification of community needs, interviews and communication with village governments, hamlet officials, educational institutions, health cadres, community leaders, and other community groups, accompanied by documentation of activities. Observations are carried out to obtain an overview of community conditions, village potential, educational facilities, environmental conditions, health activities, and socio-religious activities of the community. The results of observation and communication with the community are used to identify needs and determine programs that include the fields of education, health, economy, and environment. The implementation of the program is carried out in a participatory manner by involving the community as both beneficiaries and implementers of activities, while evaluation is carried out by observing the implementation of the program, the level of community participation, participant responses, and the potential sustainability of the activity. The data obtained is then processed descriptively through grouping and interpretation based on the field of activity to describe the process and results of the implementation of the Thematic KKN. Conclusions are drawn based on the implementation of the program, community participation, changes seen during the activity, and opportunities for the sustainability of the community empowerment program.

The number of participants and the level of attendance in each activity were recorded through attendance lists and daily logbooks. Conditions before the program were established from initial observation and from the accounts of teachers, Posyandu cadres, and village officials, while community responses were collected through unstructured interviews with parents, teachers, cadres, and village officials during the activities. The evaluation in each program area was therefore organized around four types of evidence: (1) the number of participants and attendance; (2) the activities carried out and the outputs produced; (3) community responses; and (4) changes in attendance compared with

conditions before the program. Because the evaluation was descriptive, relied on the accounts of local actors for the pre-program condition, used no control group, and was conducted during the KKN period, the results are interpreted as indications of short-term change rather than as proof of long-term impact.

Results and Discussion

This section reports the results of the Thematic KKN in each program area and relates them to previous studies. For every area, the evidence is organized around the activities carried out, the number of participants, attendance before and after the program, the outputs produced, and community responses; participants and attendance are summarized in Table 1. Because attendance before the program rests on initial observation and on the accounts of teachers, cadres, and village officials rather than on earlier written records, the differences reported below are indications of change rather than measured effects.

Table 1. *Number of Participants and Attendance Before and After the Activities*

Activity	Participants	Attendance before the program	Attendance after the program
Maghrib Mengaji	11 children	5 children	10–11 children per session
Teaching assistance at SDN 105338	23 pupils	23	23
Short-surah memorization	11 children	8	10
Anti-bullying education	30 pupils	30	30
Posyandu for toddlers	32 toddlers	20 per session	22 per session
Posyandu for the elderly	64 older adults	35 per session	43 per session
Healthy gymnastics	15 residents	5	8 per week
Broom-stick (lidi) making	8 persons	5	6
Creative piggy banks	10 children	5	10
Mutual cooperation and Mosque Care	20 residents	10	13

Note. Figures for the period before the program are based on initial observation and on the accounts of teachers, Posyandu cadres, and village officials. Source: attendance lists, daily logbooks, and cadre records (primary data, 2026).

1. Overview of Service Locations

Denai Kuala Village is a coastal lowland village located on the edge of the Strait of Malacca, with land use dominated by settlements (220 ha), agriculture/plantations (130 ha), swamps (120 ha), and fields/moorlands (30 ha). The distance of this village to the sub-district capital (Kelambir Village) is about 7 km with a travel time of 20-30 minutes, while to the district capital (Lubuk Pakam) is about 16 km with a travel time of 30-45 minutes. This condition makes Denai Kuala a village with limited accessibility, thus also affecting the equitable distribution of education, health, and economic services for its citizens.

The community's economy is dominated by the agricultural and fisheries sectors, with income dependent on the season. The social life of the community is still colored by a strong spirit of mutual cooperation, religious traditions such as weekly wirid, and local wisdom in the form of maintaining mangrove forest areas as part of the coastal ecosystem as well as the potential for village ecotourism.



Figure 1. *Office of the Head of Denai Kuala Village, Pantai Labu District, Deli Serdang Regency*

2. Optimizing Community Empowerment Through Education and Religion

Education is one of the main focuses in the implementation of Thematic KKN in Denai Kuala Village. The educational program is carried out through Maghrib Mengaji, teaching at SDN 105338 Denai Kuala Village, memorizing short surahs, and anti-bullying education. Teaching activities at SDN 105338 are carried out as a form of learning assistance for students. The presence of students provides a different learning atmosphere so that students get a more interactive learning experience.

In addition to formal education, Maghrib Mengaji activities are a means of strengthening religious education for children. These activities are directed at learning to read the Qur'an, introducing Islamic values, and forming positive habits. Short surah memorization activities are also part of strengthening religious education. Learning is carried out in stages by paying attention to children's abilities so that activities are not only oriented to memorization, but also build children's closeness to the Qur'an. Meanwhile, anti-bullying education is directed to increase children's awareness of the importance of respecting friends, avoiding acts of violence, and creating a safe learning environment. These activities show that education in community empowerment is not only oriented towards improving academic ability. But education also has a function in shaping character, moral values, social abilities, and religious awareness. These results are in line with the findings (Bara et al., 2023) which emphasized that strengthening Islamic education through

reciting assistance and character education is able to increase religious understanding and shape the personality of children at the village level significantly.



Figure 2. *Maghrib Mengaji and Wirid Activities in Denai Kuala Village*



Figure 3. *Students accompanying teaching and learning activities at SDN 105338 Denai Kuala Village*



Figure 4. *Anti-Bullying Education*

Maghrib Mengaji was held from Monday to Friday, 19.00–20.00 WIB, at the KKNT post in Hamlet 3 and was attended by 11 children (Table 1). Before the program, the Maghrib period was not used by the children for learning to recite the Qur'an: most of them played outside, while working parents had little time to accompany them in reading the Qur'an. Only about five children around the post studied the Qur'an, and on no fixed schedule. After the program began, attendance became regular. At most sessions 10 children were present and at the others all 11, or about 91 to 100 percent of the participants. The one child who was occasionally absent was asked about the reason directly or through his or her parents. To keep the children engaged, learning of Iqra' and the Qur'an according to the rules of tajwid was interspersed with Islamic songs and educational games; children who were already fluent were guided directly in reading the Qur'an, while those who were still learning the letters were accompanied individually.

Teaching assistance at SDN 105338 involved 23 sixth-grade pupils, anti-bullying education involved 30 pupils, and short-surah memorization involved 11 children (Table 1). The first two activities were delivered to existing classes, so attendance was the same before and after the program (23 and 30 pupils) and is reported as reach rather than as change. In short-surah memorization, attendance rose from 8 to 10 children, and by the end of the activity 10 children were able to memorize Surah Al-Kafirun.

These results are consistent with the role that Islamic education has long been expected to play in Indonesia, namely helping children understand and practice their religion while shaping their character and social values (Zuhdi, 2018). They also support the finding of Bara et al. (2023) that reciting assistance and character education during KKN can strengthen religious understanding at the village level, and they illustrate the wider benefits of service learning for students and the communities they serve (Salam et al., 2019).

The anti-bullying component needs to be interpreted more cautiously. A meta-analysis of school-based programs found that anti-bullying programs reduce bullying perpetration and victimization, although the effects are modest and vary considerably between studies (Gaffney et al., 2019). The session in Denai Kuala Village was a short awareness activity, and behavioral indicators such as the number of reported incidents were not measured. The result is therefore best understood as increased awareness among pupils, and follow-up by teachers is needed if lasting behavioral change is to be expected.

3. Strengthening the Health Sector

Health is one of the aspects that need attention in improving the quality of life of the

people of Denai Kuala Village. Public health conditions are not only influenced by health services, but also by daily habits, environmental cleanliness, consumption patterns, and knowledge about disease prevention. Therefore, increasing awareness about a healthy lifestyle is an important step to be taken in the village environment.

The activities carried out are directed at delivering information about clean and healthy living behaviors, maintaining personal and family hygiene, and creating a cleaner living environment. The delivery of information is carried out in simple language and adjusted to the conditions of the community so that it is easier to accept. In addition to providing knowledge, the activity also encourages the community to start implementing healthy habits in daily life The implementation of structured and interactive health education has proven effective in increasing public awareness of disease prevention and optimizing the use of basic health facilities (Suprapto & Arda, 2021).

The health program is directed to bring access to basic health services closer to vulnerable groups, namely the elderly and toddlers, as well as increase public awareness of a clean and healthy lifestyle. Posyandu activities for the elderly and toddlers are carried out regularly, including registration and recording of participant data, blood pressure and blood sugar checks for the elderly, weighing and measuring the growth and development of toddlers, filling out the Health Card (Kartu Menuju Sehat, KMS), and providing nutritious supplementary food (PMT). Students act as facilitators, assist in checking and recording data, and coordinate with the Pantai Labu Health Center and village midwives.

The results of the implementation show an increase in community participation in Posyandu activities compared to before the program started, although they are still faced with the obstacle of low awareness of some residents to attend regularly and the distance traveled to the hamlet is quite far. This obstacle is overcome through door-to-door socialization and setting the schedule of the mobile Posyandu. In addition to the Posyandu, the Healthy Gymnastics program is carried out routinely every week to improve the physical fitness of residents and strengthen friendship between residents, with the active support of PKK cadres and local community leaders.



Figure 5. *Implementation of Posyandu for the Elderly and Toddlers in Denai Kuala Village*



Figure 6*. Healthy Gymnastics Activities with the people of Denai Kuala Village*

The Posyandu for toddlers registered 32 toddlers and the Posyandu for the elderly registered 64 older adults. According to cadre records, attendance at the toddler Posyandu averaged 20 per session before the program and 22 per session during the KKN, while attendance at the elderly Posyandu rose from an average of 35 to 43 per session (Table 1), an increase of about 23 percent among older adults. Healthy gymnastics involved 15 residents with the support of PKK cadres, and average weekly attendance rose from 5 to 8. The obstacles of low awareness among some residents and the distance to the hamlet were addressed through door-to-door socialization and a mobile Posyandu schedule.

These obstacles are also found in other Indonesian settings. A case-control study of elderly Posyandu participation found that family support and distance from home were significantly associated with attendance (Nguku et al., 2022), which supports the use of door-to-door socialization and a mobile Posyandu schedule in this program. This is in line with evidence that structured and interactive health education can raise public awareness (Suprapto & Arda, 2021).

The content of the health activities also corresponds to current recommendations. Healthy gymnastics is consistent with the WHO guidelines, which recommend regular physical activity for older adults, including activities that train balance and strength (Bull et al., 2020). Weighing and measuring toddlers at the Posyandu is a relevant entry point for

monitoring nutritional status, given that child stunting in Indonesia has multiple, interacting determinants (Beal et al., 2018). Because this program recorded service activities and attendance rather than clinical outcomes, it cannot show changes in blood pressure, blood sugar, or nutritional status. These remain targets for follow-up by cadres and the Pantai Labu Health Center.

4. Optimizing the Economic Potential of the Community

The people of Denai Kuala Village have various potentials that can be used to support economic activities, one of which is through the processing of oil palm leaves into brooms. The broom making broom is an initiative that has been carried out by the community by utilizing materials available in the surrounding environment. The use of the skewer is a form of community creativity in processing existing resources so that they have benefits and use values.

In its implementation, KKNT students play the role of parties who help and participate in the process of processing broom sticks carried out by the community. Student involvement is carried out directly, starting from helping prepare materials, cleaning and tidying up skewers, to helping the process of preparing skewers into brooms. Thus, students do not become parties who determine or take over activities, but rather support activities that have been developed by the community.

The participation of KKNT students in this activity is a form of contribution in supporting the economic activities of the Denai Kuala Village community. Through direct involvement, students can help ease the work process while building interaction and cooperation with the community. Activities carried out together also provide opportunities for students to understand the economic potential that has developed in the community.

The cooperation between the community and KKNT students shows that optimizing the potential of the village can be done through the involvement of various parties. The community remains the main party that carries out broom making activities, while students play a role in providing assistance as needed during the processing process. This pattern of cooperation is expected to support the sustainability of community activities and help the use of local resources more optimally.

With the involvement of KKNT students in processing broom sticks, activities that have become part of community activities can run more helpably. In addition to providing benefits in the work process, these activities are also an experience for students in interacting and collaborating with the community in developing the economic potential

found in Denai Kuala Village.



Figure 7. *Assistance in making broom sticks with the residents of Denai Kuala Village*

Broom-stick processing was accompanied by a housewife and PKK member, Mrs. Sugiatik, and involved eight residents; attendance rose from five to six (Table 1). Before the program, residents processed brooms individually. During the KKN, residents and students together produced 48 brooms. The creative piggy bank activity involved 10 children, with attendance rising from five to ten, and produced 10 piggy banks. In this area the contribution of the students was supportive rather than directive.

Previous studies suggest that economic empowerment is more likely to benefit households when skills training is followed by further stages such as institutionalization, monitoring, and evaluation; a creative economy training program in a cooperative, for example, was reported to give participants additional income and entrepreneurship knowledge (Syahrullah & Muhtadi, 2021). The use of palm leaf midribs also fits earlier work on adding economic value to palm oil by-products in rural communities (Sembiring & Tarigan, 2022). Since income data were not collected in this program, an economic benefit cannot be claimed. The results indicate strengthened participation and skills in the use of local materials. Follow-up should therefore focus on product quality, packaging, marketing, and the formation of a small business group so that the activity can generate measurable income.

5. Community Empowerment in the Environmental Sector

A clean, orderly, and easily recognizable village environment is one of the elements that can support the comfort of the community in carrying out various activities. In Denai Kuala Village, attention to the environment is not only related to cleanliness, but also includes the arrangement of facilities and public spaces so that they look neater and have a clear identity. In this case, KKNT students also take part through activities carried out with village officials and the community.

One of the activities carried out by KKNT students is mutual cooperation at the village

head's office. This activity is carried out by cleaning and tidying up the office area and the surrounding environment. Students are directly involved in the cleaning process so that activities can be carried out together with village officials. In addition to creating a cleaner and more comfortable office environment, gotong royong activities are also a means to strengthen the relationship between KKNT students and village officials and the community.

KKNT students also helped install village signs as one of the efforts to clarify the identity and existence of Denai Kuala Village. The installation of the signs was carried out together with the village at a predetermined location. The existence of the signs can help the community and people who come from outside the village in recognizing the Denai Kuala Village area. This activity is also part of the arrangement of the village environment so that it has a clearer identity.

In addition, KKNT students contribute to decorating the village head's office and several parts of the village environment. Decoration activities are carried out to provide a neater, attractive, and comfortable appearance for people who come to the village office. This arrangement can be a form of attention to the community service space as well as giving a better impression of the village government office environment.

The series of activities shows that the contribution of KKNT students in the field of the environment is carried out through direct involvement in activities related to cleanliness, arrangement, and identity of the village environment. Students do not take over the role of the community or village officials, but help in the implementation of activities according to needs in the field. Through mutual cooperation, installation of signs, as well as the arrangement and decoration of the village head's office, students together with the community and village officials can create a cleaner, more orderly, and more comfortable environment in Denai Kuala Village. Environmental planning activities combined with religious and social participation are also able to strengthen the relationship and mutual cooperation of residents (Purnamasari et al., 2024)



Figure 8. *Mutual cooperation activities within the Denai Kuala Village Head Office*



Figure 9. *Denai Kuala Village identity sign made by Thematic KKN students*



Figure 10. *Decoration and arrangement activities of the Denai Kuala Village Head Office*

Mutual cooperation at the village head's office and the Mosque Care activity at Al-Barkah Mosque involved 20 residents together with the students, and attendance rose from about 10 to 13 (Table 1). The village sign was installed in Hamlet 3 of Denai Kuala Village, and the tidying of the village head's office was carried out together with 15 village officials. These activities mainly improved the cleanliness, order, and identity of public spaces. A systematic review of environmental education found that such programs can influence knowledge, attitudes, and behaviors, but that the outcomes depend on program design and follow-up (Ardoin et al., 2020). Because the activities in Denai Kuala Village were mostly practical and no behavioral indicators were measured, changes in residents' environmental

behavior cannot be concluded. They could be strengthened in future through environmental education for children and residents.

6. Community Responses and Feedback

The presence of the Thematic KKN students in Denai Kuala Village was well received by the residents. This attitude was visible from the beginning, when the village head, the hamlet head, and community leaders were willing to sit together with the students in the deliberation to prepare the programs. Residents also opened themselves to the students' participation in their own activities, such as the weekly wirid (perwiridan) of men and women, so that the students were not treated as outsiders.

In education, parents of Maghrib Mengaji participants expressed gratitude that their children now had a clear activity at Maghrib time and were more willing to read the Qur'an at home. One resident said, "We, the residents of Denai Kuala Village, are very grateful to the KKN students for helping the children learn to recite the Qur'an." The school considered that the presence of the students made the learning atmosphere livelier, and a teacher stated, "With the KKN students here, we were helped, and the children gained new knowledge for their lessons." (Statements are translated from Indonesian.)

In health, Posyandu and PKK cadres felt helped because the students assisted with registration, data recording, toddler weighing, and the examination of older adults. A cadre said, "We were greatly helped by the KKN students, given the limited number of health personnel in this village." The mothers who took part in broom-making welcomed the activity enthusiastically because the materials were available around their homes. Village officials considered the village sign and the tidying of the office useful and hoped that such activities would continue; one official said, "With the help of the KKN students, we were greatly helped because we can arrange the village properly."

Residents' support was also visible in simple things, such as lending places, preparing materials, and spending time between their work as fishermen, farmers, and daily laborers. These statements come from unstructured interviews and informal conversations during the activities and were not coded systematically. They are presented as illustrative evidence of acceptance rather than as a measure of effect, and because they come from people who took part in or benefited from the program, a favorable bias cannot be excluded.

7. Common Barriers and Solutions

In general, obstacles encountered in the implementation of the program include limited tools and materials to support activities, variations in the level of citizen participation at

certain hours, and difficulties in adjusting schedules to the busyness of schools and village officials. These obstacles are overcome through a creative approach in utilizing local resources, direct socialization from house to house, flexible initial coordination, and close cooperation with village cadres, community leaders, and schools. This kind of participatory approach appeared helpful in maintaining the continuity of the program despite limited village resources. Flexibility of communication and coordination with local leaders are the main keys in overcoming the dynamics of citizen participation.

These barriers are typical of participatory programs. Participation is more likely to be sustained when engagement starts early, is based on trust, and is supported by skilled facilitation (Reed et al., 2018), which is consistent with the flexible coordination with cadres, community leaders, and schools described above.

8. Benefits of Program Implementation

For students, this activity trains communication skills, leadership, and teamwork, as well as a means of applying science directly in the community. For universities, this activity is tangible evidence of the institution's contribution in carrying out the function of community service as well as opening up opportunities for sustainable cooperation with the village government. For the community, this program provides additional knowledge and skills in the field of religion and creative economy based on local potential, assistance in resource management, and strengthening the value of togetherness and mutual cooperation between residents.

These benefits are in line with the service-learning literature, which reports benefits for students, institutions, and communities alike (Salam et al., 2019). For the village, the benefits also relate to the wider framework of village development in Indonesia. The 2014 Village Law gave villages greater responsibility for their own development, but its results depend on community capacity and on responsive village institutions (Antlöv et al., 2016). Thematic KKN can contribute to this capacity when its programs are agreed with the village government and aligned with village priorities.

9. Social Educational Impact of Activities

The implementation of Real Work Lectures (KKN) in Denai Kuala Village has a positive social and educational impact on the community. Activities carried out based on the local potential and needs of the village encourage the formation of interaction, participation, and cooperation between students and the community. Through education, mentoring, and community capacity building activities in the fields of education, health, economy, and the

environment, the community gains knowledge and skills that can be applied in daily life. In addition to providing benefits to the community, KKN activities are also a means for students to develop their ability to identify problems, communicate, and design solutions based on community needs. Thus, KKN activities not only play a role as a form of higher education, but also as an empowerment process that can increase the awareness, capacity, and independence of the people of Denai Kuala Village in a sustainable manner.

10. Limitations of the Evaluation and Sustainability of the Program

The results should be interpreted within the limits of the evaluation. The evaluation was descriptive, relied on attendance records, observation, and community responses, used no control group, and was carried out during the KKN period. The findings therefore indicate short-term changes in attendance, awareness, and skills; they do not demonstrate long-term effects on health status, household income, or behavior. Attendance before the program rests on initial observation and on the accounts of residents, cadres, teachers, and village officials, and changes in attendance may also have been influenced by factors other than the program, such as work schedules and the season.

Programs that depend on an external team are at risk of ending when the team leaves, so continuation needs to be planned deliberately, for example through training, local ownership, and monitoring (Hailemariam et al., 2019). Several follow-up actions follow from the findings. In education, teachers and local religious teachers could continue Maghrib Mengaji and anti-bullying activities. In health, Posyandu and PKK cadres, together with the Pantai Labu Health Center, could continue the mobile Posyandu schedule and healthy gymnastics with simple attendance records. In the economy, residents could be supported in product development, packaging, and marketing in cooperation with the village government. In the environment, the village government and residents could set a regular mutual-cooperation schedule and maintain the village sign. Future KKN groups can also strengthen the evaluation by collecting baseline data and follow-up measurements.

Conclusion

The Thematic KKN in Denai Kuala Village, Pantai Labu District, Deli Serdang Regency, brought together activities in education, health, economy, and the environment. In education, Maghrib Mengaji, short-surah memorization, teaching assistance at SDN 105338, and anti-bullying education reached children in religious and school settings; attendance at Maghrib Mengaji reached 10 to 11 of 11 children per session, compared with about five children who studied the Qur'an around the post before the program. In health, attendance

averaged 22 per session at the toddler Posyandu (20 before) and 43 per session at the elderly Posyandu (35 before). In the economy, residents and students together produced 48 brooms and 10 piggy banks. In the environment, mutual cooperation, Mosque Care, the village sign, and the tidying of the village head's office improved the cleanliness, order, and identity of public spaces.

The success of the program was seen not only in activities that ran as planned but also in the responses of the residents. Stable attendance at Maghrib Mengaji, the support of parents, and the reported willingness of cadres and village officials to continue the activities suggest that the program was accepted and that its benefits were felt by the Denai Kuala community.

The main contribution of this program is a practical example of how students can work as facilitators and companions within a participatory approach, supporting what the community already does rather than replacing it. The program added to community capacity in the four fields, gave students experience in applying their knowledge, and strengthened cooperation between the university and the village government. This is consistent with earlier reports that thematic KKN can benefit several sectors at once (Purnomo & Mohamad, 2020; Rochaendi et al., 2024).

These conclusions are limited by the descriptive evaluation, which was carried out during the KKN period. The findings indicate short-term gains in attendance, awareness, and skills, but not long-term effects on health status, income, or behavior. Sustainability will depend on follow-up by teachers, Posyandu and PKK cadres, residents, and the village government, including simple attendance records at the Posyandu, teacher-led continuation of Maghrib Mengaji and anti-bullying education, product development and marketing for brooms and piggy banks, and a regular schedule for mutual cooperation. Future KKN groups should build on these activities and collect baseline and follow-up data so that their effects can be measured more rigorously.

References

Antlöv, H., Wetterberg, A., & Dharmawan, L. (2016). Village governance, community life, and the 2014 Village Law in Indonesia. *Bulletin of Indonesian Economic Studies*, *52*(2), 161–183. https://doi.org/10.1080/00074918.2015.1129047

Anwas, O. M. (2011). Thematic real work lecture on family empowerment post as a model of community service in higher education. *Journal of Education and Culture*, *17*(5), 565–575. https://doi.org/10.24832/jpnk.v17i5.49

Ardoin, N. M., Bowers, A. W., & Gaillard, E. (2020). Environmental education outcomes for conservation: A systematic review. *Biological Conservation*, *241*, 108224.

https://doi.org/10.1016/j.biocon.2019.108224

Bara, A. N. A. B., Rambe, R. N., Anggraini, N., Hananiyah, A., Mawaddah, L., Fadillah, M. A., Aprilia, A., & Fadhillah, S. (2023). Empowerment of Islamic Religious Education Through the KKN Program in Dalu XA Village: Identification of Issues, Innovative Implementation and Social Impact. *Alamtana: Journal of Community Service UNW Mataram*, *4*(2), 191–196. https://doi.org/10.51673/jaltn.v4i2.1728

Beal, T., Tumilowicz, A., Sutrisna, A., Izwardy, D., & Neufeld, L. M. (2018). A review of child stunting determinants in Indonesia. *Maternal & Child Nutrition*, *14*(4), e12617. https://doi.org/10.1111/mcn.12617

Bull, F. C., Al-Ansari, S. S., Biddle, S., Borodulin, K., Buman, M. P., Cardon, G., Carty, C., Chaput, J.-P., Chastin, S., Chou, R., Dempsey, P. C., DiPietro, L., Ekelund, U., Firth, J., Friedenreich, C. M., Garcia, L., Gichu, M., Jago, R., Katzmarzyk, P. T., … Willumsen, J. F. (2020). World Health Organization 2020 guidelines on physical activity and sedentary behaviour. *British Journal of Sports Medicine*, *54*(24), 1451–1462. https://doi.org/10.1136/bjsports-2020-102955

Drafting Team. (2026). *Thematic KKN Handbook of the Islamic University of North Sumatra Medan 2026*. LPKM UISU.

Gaffney, H., Ttofi, M. M., & Farrington, D. P. (2019). Evaluating the effectiveness of school-bullying prevention programs: An updated meta-analytical review. *Aggression and Violent Behavior*, *45*, 111–133. https://doi.org/10.1016/j.avb.2018.07.001

Hailemariam, M., Bustos, T., Montgomery, B., Barajas, R., Evans, L. B., & Drahota, A. (2019). Evidence-based intervention sustainability strategies: A systematic review. *Implementation Science*, *14*, 57. https://doi.org/10.1186/s13012-019-0910-6

Hindaryatiningsih, N., Yassin, M., Rizal, R., & Harjaty, E. (2024). COMMUNITY ECONOMIC EMPOWERMENT THROUGH IMPROVING THE QUALITY OF COMMUNITY HUMAN RESOURCES IN THE FIELDS OF EDUCATION, HEALTH, ECONOMY AND ENVIRONMENT. *Paduan Journal*, *5*(4), 847–856. https://doi.org/10.29303/pepadu.v5i4.6058

Jumiyati, J., Ramadhani, P. P., Novianti, D., Halisa, N., Sari, W., Hasanuddin, A., Masdar, M., Sudarman, S., Sari, N. R., & Mawaddah, S. (2025). Community Service Through the KKN Program in Wanio Village, Sidenreng Rappang Regency. *Indonesian Journal of Abdimas*, *5*(1), 166–176. https://doi.org/10.34697/jai.v5i1.1365

Ministry of Home Affairs of the Republic of Indonesia. (2020). *Regulation of the Minister of Home Affairs Number 36 of 2020 concerning Family Empowerment and Welfare*. Ministry of Home Affairs.

Nguku, M., Riwu, Y. R., & Landi, S. (2022). Factors related to participation at the elderly integrated service post in Koeloda Health Center, Golewa District, Ngada Regency. *Timorese Journal of Public Health*, *4*(3), 148–158. https://doi.org/10.35508/tjph.v4i3.6509

Nurfadhillah, N., Sulaeman, S., & Mariani, M. (2021). Education for Bullying Prevention and Character Strengthening of Children in Elementary School Environments. *National Journal of Community Service*, *2*(1), 35–42. https://doi.org/10.31849/jpmk.v2i1.6543

Purnamasari, E., Fuady, A., Sumantri, M. A., Dewiarti, A., Lia, D. W., Lensi, E. M., Saputri, M. D., Negara, O. R. T., Agustina, R., & Utami, R. P. (2024). Synergy of KKN and mosques: Realizing community empowerment at Al-Muttaqin Mosque Renah Lebar.

Mestaka: Journal of Community Service, *3*(4), 391–400. https://doi.org/10.58184/mestaka.v3i4.434

Purnomo, S. H., & Mohamad, A. S. (2020). COMMUNITY EMPOWERMENT IN BANYUMAS THROUGH HEALTH, ENVIRONMENT, EDUCATION, AND CREATIVE ECONOMY PROGRAMS. *ACTIVITY: JOURNAL OF COMMUNITY SERVICE*, *1*(1). https://jurnal.uns.ac.id/aktivita/article/view/59606

Reed, M. S., Vella, S., Challies, E., de Vente, J., Frewer, L., Hohenwallner-Ries, D., Huber, T., Neumann, R. K., Oughton, E. A., Sidoli del Ceno, J., & van Delden, H. (2018). A theory of participation: What makes stakeholder and public engagement in environmental management work? *Restoration Ecology*, *26*(S1), S7–S17. https://doi.org/10.1111/rec.12541

Rochaendi, E., Ariyani, Y. D., Sari, I. P., Mahfud, M., Kholik, N., Rouzi, K. S., Afifah, N., & Nazibi, Z. (2024). Implementation of KKN-Thematic: Optimizing Rural Development Dissemination and Community Empowerment. *EMPOWERED: Journal of Education and Community Service*, *6*(1), 75–92. https://doi.org/10.36407/berdaya.v6i1.1003

Salam, M., Awang Iskandar, D. N., Ibrahim, D. H. A., & Farooq, M. S. (2019). Service learning in higher education: A systematic literature review. *Asia Pacific Education Review*, *20*(4), 573–593. https://doi.org/10.1007/s12564-019-09580-6

Sembiring, R., & Tarigan, B. (2022). The Utilization of Palm Oil Waste (Lidi) as an Economic Value-Added Product for Rural Communities. *USU Journal of Community Service*, *3*(2), 112–119. https://doi.org/10.32734/jpk.v3i2.8901

Setiawan, A., Perangin-Angin, B. A., Sinaga, E., Rahmawati, Y. H., Fabio, H. D., Mar'i, H., Emelia, P., Hidayat, A. N., Yusti, D. N., & Barus, N. D. P. B. (2026). Thematic KKN Waste Literacy & Education as an Effort to Increase Environmental Awareness of the Teluk Palinget Village Community. *Scientific Journal of Education Forum*, *12*(4. D), 142–150. https://www.jurnal.peneliti.net/index.php/JIWP/article/view/12889

Soekanto, S. (2017). *Sociology: An Introduction*. Rajawali Press.

Suprapto, S., & Arda, D. (2021). Community empowerment through counseling on clean and healthy living behaviors improves public health status. *Journal of Community Health Service*, *1*(2), 77–87. https://doi.org/10.25311/jpkk.Vol1.Iss2.957

Syahrullah, S., & Muhtadi, M. (2021). Community economic empowerment through creative economic program in a business cooperative in Setu District, Tangerang Selatan. *Prosperity: Journal of Society and Empowerment*, *1*(2), 81–93. https://doi.org/10.21580/prosperity.2021.1.2.8221

Widyastuti, A., & Triyono, A. (2023). The Role of Thematic KKN in Strengthening the Optimization of Posyandu Services for the Elderly and Toddlers in Coastal Areas. *Journal of Community Service and Empowerment*, *7*(1), 88–96. https://doi.org/10.30595/jppm.v7i1.12100

Zuhdi, M. (2018). Challenging moderate Muslims: Indonesia's Muslim schools in the midst of religious conservatism. *Religions*, *9*(10), 310. https://doi.org/10.3390/rel9100310