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# Optimizing School Community Assets for the MBG Program Through the ABCD Approach Towards Sustainable Community-Based Food Security

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## ABSTRACT

**Background:** The Free Nutritious Meals (MBG) program in Terteck Village, Pare District, Kediri Regency faces challenges in utilizing local assets for sustainable implementation.

**Purpose:** This community service program aims to optimize school and community assets using the Asset-Based Community Development (ABCD) approach to improve children's nutritional status and establish a sustainable food security model.

**Methods:** The ABCD approach was implemented through five stages: Discover (asset mapping), Dream & Design (participatory planning), Delivery (implementation of food gardens and public kitchen), Evaluate & Sustain (monitoring and reflection). Participants included 85 students, 23 volunteers, and 9 donor parties. Data were collected through pre-post tests, observation, FGDs, and kitchen production logs.

**Results:** Asset mapping identified 1,200 m<sup>2</sup> of unused land converted into a productive garden, producing 35 kg of vegetables/month. Nutritional literacy improved by 19.3 points (from 62.4 to 81.7; paired t-test,  $p < 0.001$ ). Beneficiaries expanded from 0 to 85 students, volunteers increased from 5 to 23 persons, and active donors from 2 to 9 parties. Food cost efficiency reached 27% savings. Community participation in mutual cooperation increased by 60%.

## Keywords

School Community Assets, MBG, ABCD Approach, Food Security

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## Introduction

The National Nutrition Agency (BGN) is a non-ministerial state institution established as a strategic initiative of the Indonesian government to address the challenge of meeting national nutritional needs in a structured and sustainable manner. BGN's mandate is to coordinate cross-sectoral policies related to nutrition interventions, integrate national nutrition data, and support community empowerment programs based on local needs. This approach aligns with the findings of the Basic Health Research data (Riskesdas, 2018, p. 85), which emphasize that successful nutrition fulfillment is strongly influenced by multisectoral interventions and the active participation of local communities in building an environment that supports healthy food consumption.

One area of focus for the community-based nutrition strengthening program is Tertekek Village, Pare District, Kediri Regency. This village has significant social and educational potential due to its strategic location in an area of Islamic boarding schools and non-formal education. The Al-Muhsini Islamic Boarding School Foundation, as an influential local institution, plays a crucial role in strengthening religious values, education, and social resilience in the village community.

Social cohesion in Tertekek Village is reflected in its enduring culture of mutual cooperation. However, economic challenges remain a crucial issue. Based on interviews and field observations in 2024, more than 30% of families with school-age children were classified as economically vulnerable. This situation directly impacts the low quality of food consumption and nutritional intake of children, both in Islamic boarding schools and partner schools of the Al-Muhsini Foundation.

Meeting the nutritional needs of school-age children is a crucial foundation for improving the quality of human resources in Indonesia. Ideally, nutritious meal programs in schools and Islamic boarding schools should provide affordable and sustainable healthy food, supported by family nutrition literacy, and supported by a self-sufficient local food production system. However, conditions on the ground reveal a significant gap between these expectations and reality. Initial mapping results from the community service team in 2024 found that approximately 35% of children aged 7–15 in Tertekek Village consumed only two meals per day with low nutritional diversity. Data from the Pare Community Health Center (Puskesmas) supports this finding, indicating that the risk of mild malnutrition in this region reaches 22%. Ideally, schools and Islamic boarding schools (Pesantren) should be able to independently provide nutritious food, but in reality, most educational institutions still rely on external food supplies and lack a structured local food production system.

Most national nutrition discussions (Riskesdas, 2018) operate at macro or policy levels. There is a research gap in documenting micro-level, participatory implementation models within rural religious communities that combine policy goals with grassroots empowerment.

Theoretically, the Asset-Based Community Development (ABCD) framework shifted the paradigm of community development from a deficit-based to an asset-based approach. ABCD emphasizes identifying and mobilizing existing human, social, physical, and institutional assets as drivers of sustainable change (John P. Kretzmann and John L. McKnight, 1993). Further conceptual reinforcement positions ABCD as a strategy for transforming communities from “clients” into “citizens” through participatory development (Mathie and Cunningham, 2003).

From a social capital perspective, trust, networks, and norms of reciprocity significantly influence collective action effectiveness. In nutrition and school-based health programs, strong social capital enhances program sustainability through volunteerism, donor engagement, and institutional legitimacy (Robert D. Putnam, 2000)

In the Indonesian context, several universities have implemented school-based nutrition and community empowerment programs. For example: Universitas Gadjah Mada (2021)

implemented a healthy school food program focusing on nutrition education and sanitation, Universitas Negeri Yogyakarta (2019) developed community-based school health collaboration models, Universitas Islam Negeri Sunan Ampel Surabaya (2022) conducted pesantren-based health promotion programs, and Universitas Mulawarman (2021) developed family-based food gardens to strengthen community nutrition resilience.

These programs demonstrate strong emphasis on nutrition education, school health campaigns, and food garden development. However, most initiatives remain partially integrated and often rely on external facilitation or short-term project-based funding. Previous programs (e.g., UGM, UNY, UNMUL initiatives) often depend on institutional funding cycles. There is limited evidence of a model that demonstrates self-sustaining mechanisms through local asset mobilization and social enterprise integration.

Tertek Village, however, possesses substantial community assets that have not been fully utilized. The Al-Muhsini Islamic Boarding School Foundation has approximately 1,200 m<sup>2</sup> of unused land, adequate public kitchen facilities, an active Family Welfare Movement (PKK) group, committed Posyandu (integrated health post) cadres, and an extensive network of alumni and donors. These assets could potentially be utilized to develop a model for independently providing nutritious food for schoolchildren and Islamic boarding school students. However, the lack of asset mapping, the lack of an integrated management model, and weak synergy among stakeholders prevent these assets from having an optimal impact on community food security. This demonstrates a significant gap between the ideal situation, a community that is self-sufficient in meeting children's nutritional needs, and the actual situation, which is still plagued by limitations in local asset management.

Compared to similar community service programs, such as school healthy food programs, family nutrition education, and school-based nutrition campaigns, these programs generally focus on a needs-based approach that highlights community deficiencies without optimizing existing local potential. Most previous community service programs also failed to fully utilize school and Islamic boarding school community assets, and failed to integrate asset mapping, public kitchens, land, social networks, and educational institutions into a single food security ecosystem. This program stands out because it adopts an Asset-Based Community Development (ABCD) approach, emphasizing the development of local strengths as the primary driver of social change.

The program's novelty lies in the integration of the ABCD approach with the Free Nutritious Meal Program (MBG), thus focusing not only on providing food but also on building community-based food self-sufficiency. The program leverages five categories of community assets: human, natural, infrastructure, social, and financial, to create a healthy food system that is independent, participatory, and sustainable. The Islamic boarding school public kitchen serves not only as a cooking area but also as a center for training, nutrition education, and community development.

In implementing the Free Nutritious Meal Program (MBG) based on school community assets through the ABCD approach in Tertek Village with the Al-Muhsini Islamic Boarding School Foundation, the focus of this community service was formulated into three main statements: first, identifying the forms and strengths of community assets that could be optimized to support the free nutritious meal program for school-age children; second, designing and implementing a participatory strategy to develop and synergize physical, social, and human assets to ensure program sustainability; and third, examining the results and impacts of the MBG program on improving children's nutritional needs and empowering the Tertek Village community.

The "Optimizing School Community Assets for the MBG (Free Nutritious Meals) Program through the ABCD Approach in Tertek Village, Pare District, Kediri Regency" program

is highly urgent because it is directly related to improving the quality of student health, nutrition, and learning. The MBG program is a strategic government policy aimed at preventing stunting and improving the quality of education by ensuring adequate nutrition for students. However, its implementation at the school level often faces obstacles, particularly the limited utilization of locally available assets. In TerteK Village, much untapped potential remains, including school physical assets, local agricultural and fishery resources, food MSME networks, and the community's social capacity to support the program's sustainability.

The urgency of this program also arises because the MBG implementation has tended to rely on external supplies, thus providing little opportunity for school and village communities to play an active role in providing nutritious food. By using the ABCD approach, this program will shift the orientation from a problem-based paradigm to a potential-based one, enabling schools and communities to build self-reliance in meeting students' nutritional needs. Optimizing local assets is expected to create a more effective, efficient, and sustainable food supply system. Furthermore, increasing community participation is crucial, given that the success of the MBG program depends not only on food provision but also on understanding nutrition, healthy lifestyles, and collaboration between stakeholders. By empowering the school community and the TerteK Village community, this program can strengthen collective capacity in managing existing resources. Therefore, the urgency of implementing this program lies not only in improving students' nutritional quality but also in strengthening local food security, empowering the community's economy, and developing a model of school-village collaboration that can serve as an example of locally-based MBG implementation in other regions.

## Method

This community service program uses the Asset-Based Community Development (ABCD) approach developed by John P. [Kretzmann](#) and John L. [McKnight](#) (1993) in their landmark work, *Building Communities from the Inside Out: A Path Toward Finding and Mobilizing a Community's Assets*. The ABCD approach emphasizes the importance of community empowerment by mapping and mobilizing the community's own assets, rather than solely focusing on existing problems and deficiencies ([Kretzmann & McKnight, 1993](#)).

This approach was chosen because it is highly relevant to the context of TerteK Village, Pare District, Kediri Regency, which has an active Islamic boarding school community, strong social capital, and physical and human assets that can be optimized. ABCD provides significant scope for active community participation from the planning, implementation, and evaluation stages.

The initial stage aims to uncover in detail the assets owned by the Al-Muhsini Islamic Boarding School Foundation and the TerteK Village community that can be optimized to support the MBG program. Initial data collection is conducted through observation of the Islamic boarding school, school, public kitchen, and unused land. In-depth interviews are carried out with Islamic boarding school administrators, teachers, community leaders, the Family Welfare Movement (PKK), and parents. Secondary data are collected from the village, integrated health posts (Posyandu), and community health centers (Puskesmas) regarding nutritional and social conditions.

Asset mapping is conducted using the Asset Inventory instrument to identify physical, human, social, financial, and natural assets. Transect walks with residents are carried out to identify potential productive land, water sources, public kitchens, work groups, and other supporting facilities. The strengths, opportunities for utilization, and constraints of each asset are then assessed. Priority assets worthy of mobilization during the implementation phase are determined, such as the Islamic boarding school's public kitchen, approximately 1,200 m<sup>2</sup> of unused land, PKK cadres, integrated health posts (Posyandu), and alumni networks. The output of this phase is a

complete asset mapping document covering physical, social, and human assets, an asset location plan, and a list of priority assets for the MBG program.

The next phase aims to develop an MBG program design based on community strengths and ensure synergy among stakeholders. A Community Action Team (CAT) is established, consisting of Islamic boarding school administrators, teachers, PKK cadres, integrated health posts (Posyandu), senior students, and village government representatives. A participatory planning workshop is conducted using the FGD method to develop program objectives, kitchen SOPs, food distribution schedules, food garden models, and volunteer task allocations. A Theory of Change and Program Logic Model are designed as the basis for implementation.

Capacity building activities include training on healthy food processing based on local ingredients, organic farming training for fast-harvesting food gardens, food safety and kitchen management training, and nutrition literacy training for teachers and health workers. Standard Operating Procedures (SOPs) for the MBG program are developed, including SOPs for weekly healthy food menus, food processing, storage and distribution, kitchen sanitation and hygiene standards, and a volunteer duty rotation system. The outputs of this phase include an MBG program plan document, complete operational SOPs, a list of roles and responsibilities, and strengthened community capacity.

The implementation stage constitutes the core of the community service program, namely implementing the MBG program by utilizing the mapped and strengthened assets. Community food garden management is carried out through the utilization of Islamic boarding school land for planting fast-harvesting vegetables such as spinach, kale, and Pakcoy mustard greens. An organic farming system is applied to maintain food health. Daily work schedules are arranged for students and the Family Welfare Movement (PKK), and a crop rotation system is implemented to ensure continuous supply for the MBG kitchen.

The community healthy kitchen operates by using the Islamic boarding school kitchen as the center for healthy food production. Nutritious meals are prepared according to SOPs, containing carbohydrates, protein, vegetables, and fruit, and are distributed to school children and students at least two to three times a week. The production and distribution processes are documented for evaluation purposes.

Family and community involvement is strengthened through nutrition education for parents delivered through counselling and modules. The PKK is involved in monitoring children's nutrition and strengthening household education. Weekly mutual cooperation activities are conducted for food garden maintenance. Support and funding are mobilized by activating the alumni network as regular donors, opening a public donation channel through the "One Meal for One Child Campaign," and proposing support through village funds for food security. The output of this phase includes the regular implementation of the MBG program, increased consumption of nutritious food for children, productive food gardens, and increased community participation.

The final stage ensures that the program runs according to indicators and remains sustainable after the service period ends. Regular monitoring is conducted to assess food garden productivity in terms of harvest volume, evaluate food provision including menu, portion size, and quality, monitor children's health through BMI, weight/height, and arm circumference measurements, and record volunteer attendance and kitchen efficiency.

Program impact evaluation is conducted by surveying changes in children's and parents' nutritional knowledge, analysing the program's impact on nutritional adequacy and eating behaviour, and assessing the capacity building of cadres, the Family Welfare Movement (PKK), and students as program implementers. Community reflection is facilitated through monthly forums to evaluate successes, identify obstacles, and propose improvements, as well as formulate long-term support commitments among stakeholders.

A sustainability strategy is developed by establishing food gardens as an official program of Islamic boarding schools (Pesantren/schools), positioning healthy kitchens as centers for nutrition training and local empowerment, integrating MBG into village activities and partner institutions' CSR programs, and developing a simple business plan for healthy food production such as community healthy catering. The outputs of this phase include monitoring and evaluation reports, program sustainability models, and strengthened community self-reliance in MBG management.

From a scientific paradigm perspective, the ontology of this program views village communities and Islamic boarding schools not merely as recipients of assistance, but as subjects possessing the power, resources, and assets to develop solutions to their own problems. Epistemologically, knowledge is constructed participatory within the community through asset identification, community discussions, and direct involvement in every stage of the program. Axiologically, the objective of community service is not only to solve short-term problems such as child nutrition, but also to establish a sustainable collaborative system and culture by strengthening local assets.

The community service subjects include the Tertekek Village community, particularly residents involved with the Al-Muhsini Islamic Boarding School Foundation, students, teachers, public kitchen volunteers, PKK mothers, integrated health post (Posyandu) cadres, and elementary school students. Strategic partners include the Al-Muhsini Islamic Boarding School Foundation, village officials, partner schools, the Pare Community Health Center, and alumni of the Islamic boarding school.

Within the ABCD cycle, community asset mapping involves identifying human assets such as the skills of residents, volunteers, teachers, and senior students; physical assets such as vacant land, public kitchens, and cooking utensils; social assets such as foundations, PKK, integrated health posts, and alumni; and financial assets such as donor networks and community philanthropy. Program planning is conducted through FGDs with residents and Islamic boarding school administrators to develop the MBG program design, formulate operational plans based on the contribution of each asset, and determine program success indicators participatively. Program implementation includes healthy food processing training for volunteers, management of Islamic boarding school-based community food gardens, activation of public kitchens to provide free nutritious meals, and nutrition education for children and families. Evaluation and reflection are conducted jointly with residents and partners through qualitative discussions and quantitative measurements of nutritional intake, followed by reflection, documentation of good practices, and development of a community-based sustainability model.

Data collection techniques include participatory observation by involving the team in community activities, in-depth interviews with community leaders, teachers, volunteers, and Islamic boarding school administrators, Focus Group Discussions (FGDs) for planning and evaluation, and questionnaires to assess nutritional status and community involvement. Data validation techniques consist of source triangulation by comparing data from teachers, students, volunteers, and cadres; member checking to confirm field data with sources; and peer review through internal discussion within the community service team. Data analysis techniques include thematic qualitative analysis to understand the dynamics of community assets and participation, and descriptive quantitative analysis to measure the program's impact on nutritional intake, number of beneficiaries, and community engagement.

Finally, a Stakeholder Analysis Matrix (MAS) is prepared for the "Development of a Free Nutritious Meal Program (MBG) Based on School Community Assets through the ABCD Approach" program in Tertekek Village, Pare District, Kediri Regency.

*Table 1: Stakeholder Analysis Matrix*

<b>Institution</b>	<b>Characteristics of Institutions</b>	<b>Resources/ Expertise</b>	<b>Community Service Program Needs</b>	<b>Cooperation Steps</b>
Pare Community Health Center	Sub-district-level health service institutions under the Kediri Regency Health Office	Nutritionists, public health educators, and child nutritional status data	Developing nutrition education modules, volunteer training, and monitoring student health	Through an audience and a letter requesting cooperation from the community service team to the Head of the Community Health Center
Al-Muhsini Islamic Boarding School Foundation	Educational and religious institutions with strong institutional structures and social relations in Tertekek Village	Human resources (teachers, senior students), public kitchen, agricultural land, alumni and donor networks	Implementation of the MBG program, provision of infrastructure, field facilitators, and food distribution	Establishing internal MoUs and active involvement in all stages of community service
Al-Muhsini Islamic Boarding School Alumni Forum	A community of Islamic boarding school alumni who are active in social and religious activities	Donor network, digital social campaigns, volunteer activities	Crowdfunding campaigns, providing additional operational funds, and documenting activities	Direct coordination with the forum chair and foundation administrators, as well as publication via alumni social media

In addition, a comprehensive flowchart illustrating the structure and implementation process of the MBG (Model-Based Garden) Program developed through the Asset-Based Community Development (ABCD) approach. The diagram visually maps the logical progression from community assets (inputs) to activities, outputs, and measurable outcomes, culminating in long-term community impact. It highlights how mobilizing school and community resources can systematically strengthen nutrition literacy, improve eating behaviors, and promote sustainable food security.

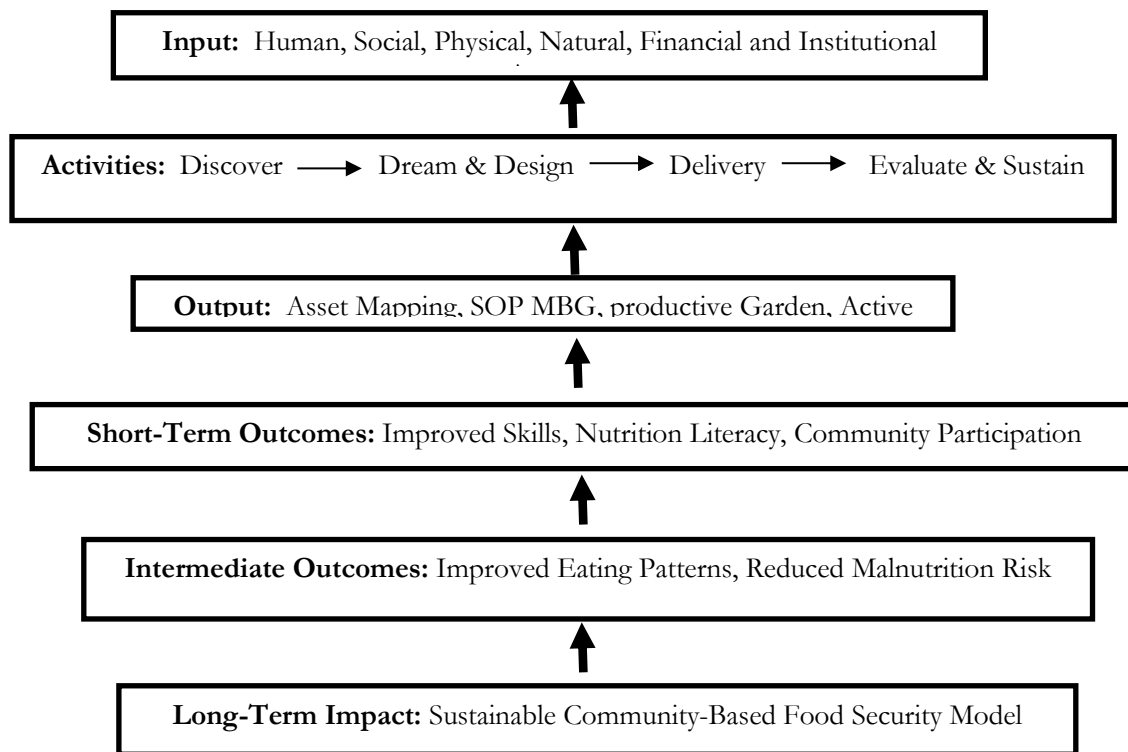


Figure 1. Diagram of MBG Program Based on School Community Assets through the ABCD Approach

As shown in Figure 1, the document contains a structured flowchart titled “Diagram of MBG Program Based on School Community Assets through the ABCD Approach.” It outlines a program framework designed to improve nutrition and food security within a school-community setting.

The diagram is organized into the following components: 1) Input: the program begins by identifying and mobilizing community assets, including human assets, social assets, physical assets, natural assets, financial assets, and institutional assets; 2) Activities: the implementation phase follows four key ABCD-based stages: Discover, Dream & Design, Delivery, and Evaluate & Sustain; 3) Outputs: these activities generate tangible program outputs such as Asset Mapping, SOP MBG (Standard Operating Procedures for MBG), a productive garden, and an active kitchen; 4) Short-Term Outcomes: the short-term outcomes include improved skills, enhanced nutrition literacy, and increased community participation; 5) Intermediate Outcomes: at the intermediate level, the program aims to achieve improved eating patterns and a reduced risk of malnutrition; 6) Long-Term Impact: in the long term, the program seeks to establish a sustainable, community-based food security model.

Overall, the document presents a logical results framework demonstrating how community assets can be strategically utilized through the ABCD approach to create sustainable improvements in nutrition and food security within a school-based context.

## Result

The presentation of research results in this section follows the procedural stages of the Asset-Based Community Development (ABCD) approach as described in the Method section, namely Asset Identification and Mapping (Discover), Participatory Planning and Capacity Building

(Dream & Design), Program Implementation (Delivery), and Monitoring, Evaluation, and Sustainability (Evaluate & Sustain). The findings are supported by field documentation, FGD records, monitoring sheets, pre–post test results, and institutional reports collected throughout the mentoring process.

The initial stage produced a comprehensive asset inventory document derived from participatory observation, in-depth interviews, transect walks, and Focus Group Discussions (FGDs). Documentation of the Community Service Team Preparation Meeting with Stakeholders confirms that asset mapping involved Islamic boarding school administrators, teachers, PKK cadres, alumni representatives, and village officials.



*Figure 2.* Community Service Team Preparation Meeting with Stakeholders Regarding the Community Service Implementation Plan

As shown in Figure 2, stakeholder engagement was central to the asset mapping stage. The mapping results identified five major asset categories. Human assets consisted of 23 active volunteers, increased from 5 before the program, including teachers, senior students, PKK cadres, and kitchen staff. Physical and natural assets included 1,200 m<sup>2</sup> of unused land that was converted into a productive nutrition garden, a stable water source, and existing public kitchen facilities. Infrastructure assets were represented by an operational communal kitchen with large-scale cooking equipment and food storage facilities. Social assets included an active alumni network, 9 donor parties increased from 2 before intervention, and a strong mutual cooperation culture. Financial assets consisted of regular alumni donations and boarding school operational support. Field observation notes and photographic documentation in the Documentation Section of the Community Service Team Preparation Meeting demonstrate that before intervention these assets functioned separately without integration into a structured food security system. After mapping, the assets were systematically linked to the MBG program framework.



*Figure 3.* Workshop and Training on Processing Garden Products for Free Nutritious Meals and Compost Processing (FGD)

As shown in Figure 3, the School Community Asset Optimization Training and Workshop for the MBG (Free Nutritious Meals) Program using the ABCD Approach was conducted as part of the community service program implementation in TerteK Village, Pare District, Kediri Regency. This activity focused on empowering the school community and surrounding community to optimize local potential to support the sustainability of the MBG program.

The participatory planning and capacity building stage resulted in the formation of a Community Action Team (CAT) consisting of 23 members and the development of MBG Standard Operating Procedures (SOPs) covering menu planning, hygiene standards, distribution mechanisms, and volunteer rotation. A Theory of Change and Program Logic Model was designed as illustrated in Figure 1 of the manuscript. Supporting evidence includes minutes of the FGD on Scientific Publication Technical Guidance (SBK 2025), workshop attendance lists involving 20 participants, and pre-test and post-test nutritional literacy instruments.

*Table 2: Nutritional Literacy Improvement*

<b>Indicator</b>	<b>Pre-Test</b>	<b>Post-Test</b>	<b>Improvement</b>
<b>Average Score</b>	62.4	81.7	+19.3 points
<b>Good Category (%)</b>	38%	79%	+41%
<b>Balanced Menu Understanding</b>	45%	84%	+39%

The results show a significant improvement in nutritional literacy. The average pre-test score of 62.4 increased to 81.7 in the post-test, reflecting an improvement of 19.3 points. The percentage of participants categorized as having good nutritional literacy increased from 38% to 79%, while understanding of balanced menus improved from 45% to 84%. The documented increase of 19.3 points in average literacy scores confirms the effectiveness of mentoring and nutrition education sessions conducted during workshops and training.

During the program implementation stage, data were collected from kitchen production logs, beneficiary attendance records, and garden harvest reports.

*Table 3: Beneficiary Expansion*

<b>Indicator</b>	<b>Before</b>	<b>After</b>
<b>Beneficiary Students</b>	0	85 students
<b>Volunteers</b>	5	23 persons
<b>Active Donors</b>	2	9 parties
<b>Distribution Frequency</b>	–	2–3 times/week

The number of beneficiary students increased from 0 before the program to 85 students after implementation. The number of volunteers increased from 5 to 23 persons, and active donors increased from 2 to 9 parties. Food distribution was conducted consistently 2–3 times per week throughout the implementation period, as confirmed by kitchen production documentation.

Nutrition garden productivity was recorded in monthly harvest logs, showing an average vegetable production of approximately 35 kg per month. Kitchen food cost efficiency reached approximately 27% savings due to the utilization of internal garden supplies. Community participation in mutual cooperation activities increased by 60%. Field documentation from the Workshop and Training on Processing Garden Products shows students directly involved in harvesting, cleaning, and processing vegetables into balanced menus containing carbohydrates, protein, vegetables, and fruit.

Composting and waste management were also integrated into the program. Documentation indicates the establishment of simple compost units within the school grounds, a

reduction of organic kitchen waste, and the utilization of compost to sustain the nutrition garden cycle. This demonstrates the integration between food production and environmental sustainability.

Monitoring, evaluation, and sustainability activities were conducted using BMI and anthropometric records in collaboration with the Pare Community Health Center, volunteer attendance sheets, monthly reflection forum minutes, and financial transparency reports for donors. Preliminary health monitoring indicates a reduction in risk indicators for mild malnutrition based on qualitative confirmation from Posyandu records. There was also improved regularity of children's meal consumption patterns, shifting from irregular two meals per day to structured balanced intake during MBG days. Documentation from monthly reflection meetings confirms stakeholder commitment to institutionalizing the nutrition garden as a permanent Pesantren program, developing a social-enterprise-based healthy catering unit, and integrating MBG activities into school learning modules.

By following the ABCD procedural stages, the mentoring process produced measurable outcomes at three levels. In the short term, there were improved food processing and composting skills, increased nutritional literacy, and increased volunteer engagement. Intermediate outcomes included improved eating patterns, reduced operational food costs, and strengthened community participation. In the long term, the program established a sustainable community-based micro food security model, institutional integration of MBG within the Islamic boarding school system, and strengthened social capital and alumni-based funding resilience.

Overall, the data obtained throughout the mentoring process, supported by workshop documentation, FGDs, attendance records, pre- and post-tests, harvest logs, and monitoring reports, demonstrate that aligning the MBG program with the ABCD procedural framework resulted in systematic mobilization of previously underutilized assets, measurable improvements in nutritional literacy and participation, quantifiable economic efficiency through garden integration, and institutional strengthening ensuring sustainability beyond the service period. The results confirm that the structured application of the ABCD approach not only improved nutritional access for 85 beneficiary students but also transformed fragmented community resources into an integrated and sustainable food security ecosystem.

## Discussion

This discussion of the results analyzes the findings of the MBG (Free Nutritious Meals) program based on the ABCD approach and connects them to relevant theory. Overall, the program results demonstrate that utilizing local assets has been proven to produce significant changes in meeting children's nutritional needs, improving nutritional literacy, and strengthening the social capital of the Tertekek Village community. These findings are consistent with community-based development literature emphasizing local asset mobilization as a driver of sustainable change (John L. McKnight & John P. Kretzmann, 1993; Mathie & Cunningham, 2003).

The first finding regarding children's nutritional status indicates that before the intervention, most children were not receiving adequate nutrition, with 35% eating only two meals a day and 22% at risk of mild malnutrition. This finding supports the theory of food security, which emphasizes three main components: food availability, access, and utilization (Food and Agriculture Organization [FAO], 2008; World Health Organization, 2014). In the context of Tertekek Village, the primary issue is not only food availability but also family access to and utilization of nutritious food. The MBG program addresses these three aspects by providing nutritious menus, nutrition education, and utilizing Islamic boarding school food gardens as a source of food. This aligns with global nutrition intervention models that integrate school feeding and nutrition education to improve child dietary outcomes (Bundy et al., 2018).

From the ABCD approach, the results demonstrate that human assets play a central role in the program's success. Teachers, PKK cadres, integrated health posts (posyandu), senior students, and volunteers are part of the human capital that is the main driver of program implementation. This aligns with John P. Kretzmann and John L. McKnight's theory that the success of community development is determined not by external assistance, but by the activation of local capacity (1993). Volunteer involvement in soup kitchens, nutrition education, and child monitoring demonstrates that community capacity increases as the program progresses, creating a sustainable empowerment process. This is further supported by empowerment theory, which emphasizes participation as a catalyst for long-term community resilience (Perkins & Zimmerman, 1995).

The natural asset, approximately 1,200 m<sup>2</sup> of Islamic boarding school land, which was later converted into a food garden, demonstrates that physical assets can be mobilized to support community food security. The garden not only serves as a source of food but also as an educational tool for students about food self-sufficiency, organic farming, and local food consumption. In the ABCD theory, this falls under the category of utilizing previously underutilized physical and natural assets, but through the program, these assets become productive and have a direct impact on children's nutritional needs. School garden interventions have been widely documented as effective strategies for improving dietary diversity and food literacy among children (Food and Agriculture Organization of the United Nations, 2010).

Furthermore, social assets such as alumni networks, donors, and Islamic boarding school congregations have proven to be factors that strengthen the program's sustainability. Robert D. Putnam (2000) explains in social capital theory that strong social networks increase the effectiveness of collective work based on trust and norms of mutual cooperation. Field findings indicate that the community trusts the Islamic boarding school's program management, resulting in increased participation in the form of financial support, labor, and food supplies. This social capital creates a virtuous cycle that supports the program's sustainability without relying on external funding. These findings are also consistent with community resilience research emphasizing bonding and bridging capital in sustaining grassroots initiatives (Aldrich & Meyer, 2015).

Infrastructure assets such as the Islamic boarding school's public kitchen, cooking equipment, and storage space have also been shown to increase program efficiency. According to asset management theory, adequate infrastructure streamlines food production and distribution, thereby maintaining program quality (Barney, 1991). In the context of the MBG (Educational Food Group), the availability of these facilities reduces operational costs and minimizes the risk of technical obstacles, ultimately improving the quality of food services to children. Efficient school feeding logistics are also recognized as critical determinants of program effectiveness (Bundy et al., 2018).

The discussion of the results also indicates that the MBG program has significant social and educational impacts. The involvement of students and Islamic boarding school students (santri) in the food garden and public kitchen demonstrates experiential learning. This increases children's awareness of the importance of healthy food and social cooperation. Furthermore, teachers, cadres, and parents gained a better understanding of the concept of balanced nutrition after participating in training conducted during the program. These findings confirm that the ABCD approach not only changes the physical structure or program but also changes mindsets, behaviors, and values within the community. Experiential and participatory learning models support this transformation process (Kolb, 1984; Freire, 1970).

The program's results also demonstrate that the Tertek Village community is ready to continue the program independently. Follow-up plans, such as strengthening the nutrition garden, establishing a social enterprise unit, and integrating the program into the village's food security

agenda, demonstrate that the program is not merely a one-time intervention but has become a model for community empowerment. This aligns with the core principles of ABCD, which emphasize sustainability through the ongoing mobilization of local assets (Kretzmann & McKnight, 1993; Mathie & Cunningham, 2003).

Overall, the discussion of the results confirms that the asset-based approach is highly effective in improving micro-food security, strengthening social networks, increasing nutritional literacy, and creating sustainable social change. The MBG program not only meets children's nutritional needs but also inspires communal change based on local strengths, enabling it to be replicated by schools. These findings reinforce broader evidence that community-driven nutrition and school-based food programs are among the most sustainable strategies for addressing child malnutrition in resource-limited settings (World Health Organization, 2014; Food and Agriculture Organization of the United Nations, 2010).

## Conclusion

The Community Asset Optimization Training & Workshop program to support the MBG (Free Nutritious Meals) Program in TerteK Village demonstrated that local strengths, whether human, social, physical, financial, or institutional, can work together like a small orchestra, uniting many sounds into a harmonious whole.

The training on crop processing, composting, and mentoring on the ABCD approach created a domino effect: participants not only gained technical skills but also rediscovered the potential of their own environment and community. Participants learned that harvests can become nutritious meals, organic waste can be transformed into valuable fertilizer, and community assets can become the backbone of food independence.

The program's results demonstrate that participants' skills in food processing and composting improved significantly as they became more confident and competent in utilizing local resources. Community assets, ranging from teachers, students, PKK (Family Welfare Movement) members, to Islamic boarding school gardens, were carefully mapped and effectively operationalized to support program implementation. In addition, Islamic boarding school gardens and alumni social networks emerged as important pillars of program sustainability, ensuring that the initiatives continued beyond the initial intervention phase.

Throughout the process, the program successfully fostered a spirit of mutual cooperation, strengthening social capital and enhancing nutritional literacy within the community. This collaborative atmosphere encouraged shared responsibility and collective problem-solving. Moreover, the community demonstrated a readiness to continue the program independently, which stands as a key indicator that genuine empowerment is taking place.

Overall, the ABCD approach proved to be well suited to the TerteK Village context. It not only changed practical behaviors but also transformed the way the community perceived and valued what they already possessed. The MBG program exemplifies how meaningful change begins with recognizing and mobilizing local assets that were previously hidden in one's own backyard.

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## Conflicts of Interest

The authors declare that there is no conflict of interest regarding the publication of this article. The program implementation and research activities were conducted independently without any commercial or financial relationships that could be construed as a potential conflict of interest.

## References

- Aldrich, D. P., & Meyer, M. A. (2015). Social capital and community resilience. *American Behavioral Scientist*, 59(2), 254–269. <https://doi.org/10.1177/0002764214550299>
- Badan Meteorologi, Klimatologi, dan Geofisika. (2024). *Prakiraan cuaca dan kondisi iklim wilayah Kediri*. BMKG.
- Badan Penelitian dan Pengembangan Kesehatan. (2018). *Riset kesehatan dasar (Riskesdas) 2018*. Kementerian Kesehatan Republik Indonesia.
- Badan Pusat Statistik Kabupaten Kediri. (2023). *Profil statistik Kabupaten Kediri*. BPS Kabupaten Kediri.
- Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99–120. <https://doi.org/10.1177/014920639101700108>
- Bundy, D. A. P., de Silva, N., Horton, S., Jamison, D. T., & Patton, G. C. (Eds.). (2018). *Disease control priorities* (3rd ed., Vol. 8, Child and adolescent health and development). World Bank. <https://doi.org/10.1596/978-1-4648-0423-6>
- Desa TerteK. (2024). *Profil dan data statistik pemerintahan Desa TerteK, Kecamatan Pare, Kabupaten Kediri*. Pemerintah Desa TerteK.
- EMIS Kementerian Agama Republik Indonesia. (2024). *Education Management Information System (EMIS): Data madrasah Desa TerteK*. Kementerian Agama RI.
- Food and Agriculture Organization of the United Nations. (2008). *An introduction to the basic concepts of food security*. FAO.
- Food and Agriculture Organization of the United Nations. (2010). *A new deal for school gardens*. FAO.
- Freire, P. (1970). *Pedagogy of the oppressed*. Continuum.

- Kementerian Kesehatan Republik Indonesia. (2023). *Rencana aksi nasional percepatan perbaikan gizi (RAN-PG) 2023–2027*. Direktorat Gizi dan Kesehatan Ibu dan Anak.
- Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development*. Prentice Hall.
- Kretzmann, J. P., & McKnight, J. L. (1993). *Building communities from the inside out: A path toward finding and mobilizing a community's assets*. Institute for Policy Research.
- Mathie, A., & Cunningham, G. (2003). From clients to citizens: Asset-based community development as a strategy for community-driven development. *Development in Practice*, 13(5), 474–486. <https://doi.org/10.1080/0961452032000125857>
- Perkins, D. D., & Zimmerman, M. A. (1995). Empowerment theory, research, and application. *American Journal of Community Psychology*, 23(5), 569–579. <https://doi.org/10.1007/BF02506982>
- Poltekkes Kemenkes Bandung. (2020). *Gerakan makan sehat untuk keluarga pesisir di Pantai Utara Jawa Barat*. Poltekkes Kemenkes Bandung.
- Profil Desa Tertek. (2024). *Profil dan data statistik pemerintahan Desa Tertek, Kecamatan Pare, Kabupaten Kediri*. Pemerintah Desa Tertek.
- Puskesmas Pare. (2024). *Laporan status gizi anak Desa Tertek tahun 2024*. Puskesmas Pare, Kabupaten Kediri.
- Putnam, R. D. (2000). *Bowling alone: The collapse and revival of American community*. Simon & Schuster.
- Radar Kediri. (2023). Pemanfaatan sumber air Wadon untuk budidaya ikan. *Radar Kediri*.
- Riskesmas. (2018). Riset Kesehatan Dasar 2018. Badan Penelitian dan Pengembangan Kesehatan, Kementerian Kesehatan RI.
- Universitas Airlangga. (2020). *Pemberdayaan komunitas gizi ibu dan anak di wilayah urban padat*. Fakultas Kesehatan Masyarakat, Universitas Airlangga.
- Universitas Andalas. (2021). *Program edukasi gizi anak sekolah dasar melalui media permainan interaktif*. Fakultas Kesehatan Masyarakat, Universitas Andalas.
- Universitas Gadjah Mada. (2021). *Laporan program pangan sehat sekolah di Kabupaten Sleman*. Lembaga Penelitian dan Pengabdian kepada Masyarakat, Universitas Gadjah Mada.
- Universitas Islam Negeri Sunan Ampel Surabaya. (2022). *Santri sehat berbasis pesantren: Program penyuluhan perilaku hidup bersih dan sehat di lingkungan pondok pesantren*. Lembaga Pengabdian kepada Masyarakat, UIN Sunan Ampel Surabaya.
- Universitas Mulawarman. (2021). *Kampung gizi berdaya: Pengembangan kebun pangan keluarga berbasis komunitas di Samarinda*. Fakultas Pertanian, Universitas Mulawarman.
- Universitas Negeri Yogyakarta. (2019). *Sekolah sehat berbasis komunitas: Kolaborasi edukasi gizi dan sanitasi sekolah dasar*. LPPM Universitas Negeri Yogyakarta.
- World Health Organization. (2014). *Global nutrition targets 2025: Policy brief series*. WHO.