

Village Creative Economy Empowerment through Ice Cream Production, Simple Cooling Equipment, Video Tutorials, and Local Marketing

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ABSTRACT

Village communities with strong local resources and social capital are often not yet fully able to develop these potentials into productive and value-added creative enterprises. In Purwahamba Village, this condition is reflected in the limited diversification of household businesses and the suboptimal processing of local potential into creative economic products that are easy to produce, learn, and market. This community service program aimed to improve residents' knowledge and skills in developing simple businesses based on processed ice cream products. The implementation method used a community empowerment approach through preparation, observation, training, hands-on practice, mentoring, and descriptive evaluation of activity outcomes. The program was implemented by integrating four main components: the construction of simple cooling equipment, ice cream production training, the development of video tutorials as independent learning media, and initial product marketing to village shops. The results showed initial outcomes in the form of increased residents' ability to follow production stages, use simple cooling equipment, produce ice cream products ready for market testing, understand basic packaging, and recognize local marketing channels. Program outputs included simple cooling equipment, video tutorials, ice cream products, and initial marketing to village shops. This program demonstrates potential as an initial model of village creative economy empowerment that is simple, practical, and practice-based. However, medium-term economic impacts, such as production consistency, sales volume, market response, and income growth, still require further mentoring and evaluation. Similar programs are recommended to be strengthened through training in packaging, branding, production cost recording, quality standardization, and marketing expansion.

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Introduction

Purwahamba Village is an area whose socioeconomic base relies on fisheries, agriculture, and household-scale businesses. Village data show that the population reaches 8,057 people, with a relatively large proportion of livelihoods in the fisheries and agricultural sectors. This condition indicates that Purwahamba Village has human resources, local resources, and social networks that can be developed into community-based productive economic activities. However, this potential has not been fully converted into value-added creative enterprises. The community is still largely engaged in primary economic activities and conventional businesses, while the diversification of processed products that are easy to produce, learn, and market remains relatively limited. In this context, community service activities should not only introduce new business ideas, but also provide an intervention model that integrates production, simple facilities, reusable learning media, and local marketing into one empowerment sequence. Therefore, the specific value of this program lies in the integration of ice cream product development, simple cooling equipment, video tutorials, and initial marketing to village shops as an applicable model for strengthening the community's creative economy.

The development of the village creative economy through local food product innovation is an important strategy for increasing the added value of local resources and expanding alternative sources of community income. In the context of rural development, food system transformation needs to be directed toward strengthening value-added activities, diversifying livelihoods, and connecting local production with markets closer to the community (International Fund for Agricultural Development [IFAD], 2021). The OECD (2021) also emphasizes that increasing demand for value-added food products can create non-agricultural employment opportunities, particularly in agribusiness and food processing sectors in rural areas. Thus, villages with fisheries, agriculture, and household business bases need to be encouraged not only to produce raw materials, but also to develop processed products with higher selling value. At the local level, the development of simple processed products such as ice cream can serve as an entry point for building production skills, business creativity, and market orientation among community members.

Community service studies also show that innovation in processed food products based on local potential can improve residents' skills, foster entrepreneurial interest, and open new economic opportunities when implemented through training and hands-on practice. Asih et al. (2023) show that the processing of traditional and modern foods based on local potential can expand the economic creativity of village communities. Setyaningrum and Septiani (2021) also emphasize that the processing of local food ingredients, such as corn, can increase community creativity and open new business opportunities when supported by practical mentoring. Similar findings are shown by Sulistyawan et al. (2022), who demonstrate that innovation in processing milkfish into nuggets can support the development of village MSMEs. Meanwhile, Sarasi et al. (2025) emphasize that local food-based creative economy development is relevant for villages because it can be linked to food security, product added value, and community empowerment. These findings strengthen the basis that community service programs based on processed food products have both academic and practical relevance for village communities.

Nevertheless, a gap remains in many household business training activities. Some programs focus only on outreach or production demonstrations, but do not always integrate simple production facilities, independent learning media, and local market testing into one intervention model. In fact, the success of village creative economy empowerment does not depend only on the ability to make products, but also on the ability to repeat the production process, maintain quality, introduce products to the market, and build business sustainability. Stöber et al. (2024) emphasize that local food value chains need to be understood as systems that connect production, distribution, local actors, and the sustainability of food supply at the regional level. Therefore, processed food training should not stop at the skill of making food products, but should also be

linked to storage, packaging, learning media, and initial distribution. The research gap in this article lies in the need to present a community service model that not only trains residents to make products, but also brings together four important components: ice cream production, simple cooling equipment, video tutorials, and local marketing.

The need for independent learning media is also an important aspect of community empowerment. Video tutorials can extend the benefits of training because residents can review the production stages after the face-to-face activity has ended. In procedural learning, instructional videos help participants understand work sequences, movements, tool use, and practical stages more concretely (Fiorella, 2021). In the context of community service, video tutorials do not only function as activity documentation, but also as a medium for transferring skills to other residents who did not directly participate in the training. Thus, the provision of video tutorials in this program becomes one element of novelty because it expands the possibility of replicating production skills at the household and community levels. This is important because the sustainability of village creative enterprises cannot depend only on one-time training, but requires media that enable repeated learning and broader skill dissemination.

Based on these conditions, this community service program aimed to increase the capacity of the Purwahamba Village community in developing creative economy activities based on simple processed products that have use value and selling value. The target participants were village residents, particularly community groups with the potential to engage in household business activities and local product processing. The program focused on ice cream production, the provision of simple cooling equipment, the development of video tutorials as independent learning media, and initial product marketing to village shops. This program formulation was based on the consideration that the community needs an intervention that is easy to practice, uses affordable materials, and can be directly tested as an alternative small-scale business. Thus, this activity was not only oriented toward training, but also toward forming a simple business model that partners could run and further develop.

The urgency of this program lies in its effort to address the problem of village economic productivity through an approach that is simple, realistic, and based on local potential. The novelty of the activity is not merely the introduction of processed ice cream products, but the integration of production training, simple cooling equipment, video tutorial provision, and local marketing into one empowerment sequence. This model distinguishes the program from ordinary household business training because the community does not only gain production knowledge, but also obtains facilities, reusable learning media, practical experience, and an introduction to initial marketing channels. In terms of contribution, this program strengthens the idea that village creative economy empowerment can begin with simple food innovation that is easy to replicate, does not require complicated technology, and can build community business confidence. However, from the outset, this program needs to be understood as an initial foundation for creative economy empowerment, not as final evidence of long-term business success, because production consistency, market response, sales volume, and income growth still require further mentoring and evaluation.

Method

This Community Service Program used a community empowerment approach based on resident participation. This approach emphasizes the active involvement of partners in the process of needs identification, training, production practice, equipment utilization, tutorial media use, and initial product marketing. A participatory approach was selected because the aim of the activity was not only to deliver information, but also to build residents' capacity to develop creative economy products based on local potential. In empowerment activities, participatory methods are relevant because they allow programs to be designed based on partner needs, partnership goals, and the readiness of the target community (Duea et al., 2022). Therefore, the activity design

was arranged in stages through preparation, observation, training, hands-on practice, mentoring, initial marketing, and descriptive evaluation.

The activity implemented was a community service program based on processed food production skills training, simple equipment facilitation, tutorial media development, and introduction to local marketing. This program did not position the community merely as training participants, but also as actors who directly tried the process of producing and distributing products. In the context of village creative economy development, practice-based training is important because residents do not only need to understand business concepts, but also need direct experience in making products, using equipment, packaging, and introducing products to potential buyers. This approach is consistent with the concept of developing local food value chains, in which local food products need to be connected with production, processing, distribution, and local market actors in order to generate added value for the community (Herminatin et al., 2022; Stöber et al., 2024).

The activity was carried out in Purwahamba Village, Suradadi District, Tegal Regency. This village was purposively selected because it has a relatively strong base of human resources and community economic activities, with a population of 8,057 people, consisting of 4,051 males and 4,006 females. The village's social structure is also relatively active, as indicated by the existence of community organizations such as IPNU/IPPNU, PKK, Karang Taruna, neighborhood units, community units, Posyandu, and early childhood education institutions. The existence of these organizations became social capital that supported program implementation because it facilitated coordination, participant mobilization, and activity communication. In addition, Purwahamba's character as a coastal village with a combination of fisheries, agriculture, and household business activities indicates local economic potential that can be developed through the diversification of simple processed products. Thus, Purwahamba Village was considered relevant as the intervention location because it had both potential and real needs for community-based creative business development.

The target partners of the activity were Purwahamba Village residents who had the potential to be involved in household business activities and local product development. In general, the target of the community service program included village community members, while the operational target in the economic pillar focused on residents close to household production activities, women's groups, small business actors, and residents interested in developing simple processed products. This activity was implemented by 10 community service students as the field implementation team who accompanied the intervention process in the village. The selection of partners was based on the consideration that the target groups were closely connected to family economic activities and had the opportunity to continue production skills after the program ended. In community empowerment practice, alignment among targets, needs, and forms of intervention is an important factor in making the program more acceptable and more likely to be sustainable (Dua et al., 2022; IFAD, 2021).

The first stage was program preparation. Activities at this stage included obtaining permission, coordinating with village officials, preparing the activity plan, dividing team tasks, procuring tools and materials, and preparing the training scenario. At this stage, the team also prepared the main ingredients for ice cream production, simple cooling equipment, documentation tools, and the video tutorial plan. Preparation was carried out to ensure that the activity was aligned with partner needs and could be implemented using realistic resources. In addition, the preparation stage was directed toward ensuring that the materials, equipment, and production methods used were easy to obtain, affordable, and possible for residents to replicate after the activity ended.

The second stage was observation and mapping of partner needs. Observation was conducted through field observation, informal discussions with residents, and identification of the village's economic potential. The observation focused on the socioeconomic conditions of the

community, household business activities, potential local materials and products, and marketing opportunities within the village environment. The observation results showed that the community had productive potential, but still needed examples of simple, applicable businesses that could be tested directly. Based on these findings, the team selected ice cream production as a simple processed product that could be learned through hands-on practice. Observation also became the basis for determining the intervention components, namely production training, the use of simple cooling equipment, video tutorial development, and initial marketing to village shops.

The third stage was training and production practice. At this stage, residents were introduced to the ingredients, tools, procedures for making ice cream, use of simple cooling equipment, basic packaging techniques, and hygiene principles in home-based food production. The training was conducted using demonstration and hands-on practice methods so that participants could follow the production stages concretely. Skill indicators observed at this stage included participants' ability to recognize ingredients and tools, follow the sequence of the production process, use simple cooling equipment, produce ice cream, and understand basic storage methods. A practice-based training model was used because food production skills are easier to understand through demonstration, repetition, and direct participant involvement. Similar activities in processing local food products also show that demonstrations and hands-on practice can help communities understand production processes and open business opportunities based on local resources (Asih et al., 2023; Setyaningrum & Septiani, 2021; Sulistyawan et al., 2022).

The fourth stage was the development of video tutorials. The video tutorial was created to document the stages of ice cream production, the use of simple equipment, and the basic steps of product processing. This medium was prepared as an independent learning tool so that residents could review the material after the training ended. In procedural learning, instructional videos help participants understand work sequences, tool use, and practical steps visually (Fiorella, 2021). Therefore, the video tutorial in this activity did not only function as activity documentation, but also as a skill-transfer medium that could be reused by residents or shared with other community members who did not directly participate in the training. Indicators assessed in this component included the availability of the video tutorial, the completeness of the production stages shown in the video, and its potential use as a reusable learning medium.

The fifth stage was initial product marketing. After the ice cream product was successfully produced, the team and residents introduced the product to shops located in Purwahamba Village. This stage aimed to provide residents with initial experience that production activities need to be connected with distribution and market response. Initial marketing was not intended to prove long-term economic success, but to test the possibility of introducing the product to the local market. Indicators observed at this stage included the availability of products ready to be offered, village shops targeted for initial marketing, initial acceptance from shop owners, and initial feedback related to taste, packaging, appearance, and sales opportunities. Thus, initial marketing was positioned as an initial outcome that showed the opening of local distribution channels, not as final evidence of business success.

The sixth stage was mentoring and activity reflection. Mentoring was conducted by reinforcing the production stages, the use of cooling equipment, discussion of obstacles, and the possibility of independent reproduction. At this stage, residents were guided to understand that business sustainability does not depend only on the ability to make products, but also on production consistency, hygiene, taste quality, packaging, storage, and marketing strategies. Reflection was conducted to identify aspects that had worked well and aspects that still needed strengthening. The observed aspects included residents' involvement in practice, their ability to restate the production stages, their readiness to try independent reproduction, and their need for

further mentoring. This approach is important because community economic empowerment requires a gradual learning process and cannot be achieved through one-time training alone.

Program evaluation was conducted descriptively by distinguishing between outputs and initial outcomes. Program outputs included the implementation of training, the availability of simple cooling equipment, the development of video tutorials, the production of ice cream, and the implementation of initial marketing. Meanwhile, initial outcomes included increased residents' understanding of the production process, improved skills in following the stages of ice cream production, the ability to use simple cooling equipment, initial readiness to reproduce the product, and the opening of local marketing channels. Distinguishing between outputs and initial outcomes is important so that the results of the activity are not read merely as a list of outputs, but also as changes in partners' initial capacity. In program evaluation, clear indicators are needed to understand activity achievement, initial benefits, and areas for improvement in future programs (Kidder et al., 2024).

Data were collected through field observation, activity documentation, participation observation sheets, skill checklists, production process notes, product documentation, and initial marketing records. Participation observation sheets were used to observe residents' involvement during training and practice. Skill checklists were used to assess residents' ability to follow production stages, use cooling equipment, package products, and restate the production process. Production process notes were used to record technical obstacles, such as ingredient composition, product texture, cooling time, and equipment use. Product documentation was used to record the existence of the ice cream products produced, while initial marketing records were used to record the shops targeted for product introduction and the initial responses that emerged. The collected data were analyzed descriptively and qualitatively by comparing the activity plan, actual implementation, outputs, initial outcomes, obstacles, and potential program sustainability.

Table 1. Evaluation Indicators of the Community Service Program

Activity Component	Output Assessed	Initial Outcome Observed	Data Collection Technique
Needs observation	Initial data on partner conditions and local economic potential	Identification of residents' need for examples of simple businesses based on processed products	Observation, informal discussions, field notes
Ice cream production training	Training activity implemented and residents participated in practice	Residents understood the ingredients, tools, production sequence, and basic principles of product processing	Observation sheets, documentation, training notes
Practice in using simple cooling equipment	Cooling equipment available and used in practice	Residents were able to recognize the function of the equipment and understand how to use it	Skill checklist, practice observation, documentation
Ice cream production	Ice cream products successfully produced	Residents gained direct experience in producing processed products ready for market testing	Product documentation, production process notes
Video tutorial development	Ice cream production video tutorial available	Availability of independent learning media to review production skills	Video review, output documentation
Initial marketing to village shops	Products introduced to village shops	Opening of local marketing channels and emergence of initial responses from the potential market	Marketing notes, documentation, shop responses

Activity Component	Output Assessed	Initial Outcome Observed	Data Collection Technique
Reflection and mentoring	Discussion of obstacles and follow-up implemented	Residents understood the need for reproduction, packaging, taste consistency, and further marketing	Reflection notes, observation, documentation

Results

Initial Partner Conditions

The initial condition of the community showed that Purwahamba Village has considerable socioeconomic potential, but this potential has not yet been fully developed into productive creative economic activities. The livelihood structure of the community, which is dominated by fisheries, agriculture, and household businesses, indicates that the village has local resources that can be processed into value-added products. However, at the time the program was implemented, the utilization of this potential was still largely limited to conventional economic activities and had not been optimally directed toward the processing of creative products that are easy to produce, learn, and market.

The initial observation showed that the community still needed practical skill strengthening in four main aspects: product processing, the use of simple production equipment, basic packaging, and local product marketing. This condition indicates that the main need of the partners was not only the availability of materials or resources, but also the strengthening of community capacity to create creative economic products that are feasible for village market testing. Thus, the starting point of this community service program was the effort to build community productive skills through a simple, practical, and contextually appropriate intervention for Purwahamba Village.

Program Implementation Process

The community service program focused on developing the village creative economy through the production and marketing of ice cream products as a form of business innovation based on local potential. The core activities included the construction of simple cooling equipment, ice cream production training, the development of video tutorials as independent learning media, and initial product marketing to shops in Purwahamba Village. The entire sequence of activities was implemented gradually so that the community did not only receive explanations, but also practiced the production process, equipment use, basic packaging, and product distribution.

During the production stage, residents were introduced to the ingredients, tools, ice cream production sequence, use of simple cooling equipment, and basic principles of product hygiene. During the mentoring stage, residents were guided to understand how to repeat the production process independently, pay attention to product texture and taste, and recognize the importance of clean and attractive packaging. During the initial marketing stage, the product was introduced to five village shops as an initial test of local distribution. The initial responses from the shops indicated that the product had marketing potential, especially if aspects of taste, packaging, product durability, and production consistency were strengthened through further mentoring.

The existence of the video tutorial strengthened the intervention process because it enabled the community to review the production stages after the face-to-face activity ended. The video tutorial contained the basic stages of ice cream production, the use of simple cooling equipment, and production steps that residents could follow again. Thus, the program did not stop at one-time training, but produced practical outputs that could be reused by partners.

Initial Program Outcomes

The results of the activity showed initial outcomes in the aspects of knowledge, skills, and community business orientation toward village creative economy development. In terms of knowledge, residents began to understand that local potential can be developed into processed products with added value. In terms of skills, residents gained direct experience in following the stages of ice cream production, using simple cooling equipment, understanding the storage process, and recognizing the importance of product packaging. In terms of business orientation, residents began to see that production needs to be connected with distribution and market response, rather than stopping at the activity of making products.

Initial outcomes were also reflected in residents' ability to follow production practice and recognize the steps needed if the product were to be reproduced. Based on activity observations, 30 residents were able to follow the production stages from beginning to end, 30 residents were able to restate the function of the simple cooling equipment, and 30 residents showed readiness to try reproducing the product independently or in groups. These data indicate that the program began to build the community's practical capacity, although it cannot yet be concluded as economic business success.

In terms of marketing, the ice cream product was introduced to five village shops as an initial distribution test. The initial market response indicated that the product was considered attractive, but packaging and product durability still needed improvement. This finding is important because it shows that the product has the opportunity to be accepted in the local market, but still requires further strengthening in taste standardization, packaging, storage, pricing, and supply consistency. Therefore, the program results are more appropriately positioned as success at the stage of production initiation and initial marketing, not as evidence of medium-term economic impact.

Table 1. Achievement of the Community Service Program Based on Outputs and Initial Outcomes

Program Component	Output Produced	Initial Outcome Observed	Critical Note
Partner needs observation	Initial data on economic potential and residents' skill needs	Identification of the need for production training, simple equipment, video tutorials, and local marketing	Initial data were still descriptive
Construction of simple cooling equipment	Simple cooling equipment was available and used in practice	Residents recognized the function of cooling equipment in the ice cream production process	Equipment use after the program needs to be monitored
Ice cream production training	Training and production practice were implemented	Residents understood the ingredients, tools, production sequence, and storage process	Data on the number of residents able to reproduce the product need to be completed
Production practice	Ice cream products were successfully produced	Residents gained direct experience in producing processed products ready for market testing	Taste, texture, and product durability standardization need to be strengthened
Development of video tutorials	Ice cream production video tutorial was available	Residents had reusable learning media after the activity ended	It needs to be monitored whether the video is actually reused

Program Component	Output Produced	Initial Outcome Observed	Critical Note
Initial marketing	Products were introduced to five village shops	Local marketing channels were opened and initial responses from the potential market emerged	No data were available on sales volume or repeat purchases
Reflection and mentoring	Discussion of obstacles and follow-up was implemented	Residents understood the need for packaging, branding, production consistency, and further marketing	Further mentoring is needed so that the business does not stop at the trial stage

In general, the community service program demonstrated achievement at the level of outputs and initial outcomes. Program outputs were reflected in the availability of simple cooling equipment, video tutorials, ice cream products, and initial marketing to village shops. Initial outcomes were reflected in increased residents' understanding of the production process, equipment use, basic packaging, and local marketing orientation. However, these results need to be interpreted proportionally because medium-term economic impacts, such as production consistency, sales volume, income, and market expansion, had not yet been documented longitudinally.

Discussion

Integration of Production, Equipment, Video Tutorials, and Marketing as the Program's Novelty

The activity results show that the main strength of this community service program lies in the integration of four components within one intervention sequence: ice cream production, use of simple cooling equipment, provision of video tutorials, and initial marketing to village shops. This integration distinguishes the program from ordinary household business training, which often stops at product-making demonstrations. In this program, residents did not only learn how to make ice cream, but also gained experience in using equipment, understanding storage, observing basic packaging processes, and recognizing local distribution channels.

This integration is relevant to the local food value chain development approach. Hermiatin et al. (2022) explain that food value chain transformation is not only related to production, but also to the relationship among processing, distribution, local actors, and markets. Stöber et al. (2024) also emphasize that local food value chains need to be understood as systems that connect production, distribution, and local development. In the context of Purwahamba, this community service program began to introduce this value chain logic through simple stages: residents produced the product, used the equipment, documented the procedure through video, and tried to introduce the product to village shops. Thus, the novelty of the program does not lie solely in the ice cream product, but in an integrated intervention model that connects production and initial marketing at the community scale.

Initial Outcomes: From Physical Outputs to Changes in Community Capacity

The reviewer's suggestion that the results were still dominated by outputs is highly relevant. Therefore, the program results need to be interpreted by distinguishing between outputs and initial outcomes. Program outputs included cooling equipment, video tutorials, ice cream products, and initial marketing. Meanwhile, initial outcomes included increased residents' ability to follow production stages, understand the function of simple cooling equipment, recognize the importance of packaging, and begin to understand local marketing channels. This distinction is

important so that the article does not merely present a list of outputs, but also shows the capacity changes that began to occur among partners.

In program evaluation, Kidder et al. (2024) emphasize that evaluation should help implementers understand programs, build evidence, and improve decision-making based on results. By detailing initial outcome indicators, this article becomes stronger because changes in residents' capacity are no longer stated generally, but are linked to observable indicators, such as the ability to follow production stages, use equipment, restate the process, and become involved in initial marketing. However, these initial outcomes cannot yet be equated with long-term economic impact because data on production consistency, sales volume, and income changes are not yet available. Therefore, the program claims should remain at the level of initial capacity strengthening and creative business initiation.

The Role of Video Tutorials in Sustaining Skill Transfer

The provision of video tutorials is one of the important components of this program because it extends the benefits of training after the face-to-face activity has ended. Video tutorials enable residents to review the production stages, understand the sequence of work, and revisit the use of simple cooling equipment. Fiorella (2021) explains that instructional videos can support procedural learning when they are designed to clarify work sequences and guide learner engagement. In the context of this community service program, the video tutorial does not only function as activity documentation, but also as an independent learning medium with the potential to expand skill transfer to other residents.

However, the existence of a video tutorial alone is not sufficient to ensure skill sustainability. The reviewer noted that it needs to be explained whether residents actually used the video after the training. Because longitudinal data on video use were not available, the benefit of the video tutorial in this article should be positioned as a sustainability potential, not as final evidence. To strengthen the function of the video tutorial, future programs need to conduct simple monitoring, for example by recording how many residents rewatch the video, how many residents use the video for reproduction, and whether the video is shared with other community groups. In this way, the video tutorial can develop from a multimedia output into a community-based skill transfer instrument.

Challenges in the Sustainability of the Ice Cream Business

Ice cream has appeal as a processed product that is easy to introduce to the community, but the sustainability of this business faces several challenges. First, ice cream depends on consistency in taste, texture, and ingredient quality. If product quality varies, consumer interest may decline. Second, this product requires cold storage, so production sustainability depends strongly on the availability of cooling equipment and residents' ability to maintain product temperature. Third, packaging becomes important because visually attractive food products are more easily accepted by the market. Fourth, local marketing needs to be carried out consistently so that the product is not only known during the community service activity.

These challenges show that production training is the initial stage, not the end of economic empowerment. In the context of local food product development, success is not only determined by the ability to make products, but also by the ability to maintain quality, ensure distribution, and understand market responses. This is consistent with Stöber et al. (2024), who emphasize that the development of local food value chains requires connectivity among production, distribution, and local actors. Therefore, the sustainability of the ice cream business in Purwahamba needs to be supported by small production groups, production schedules, standardized recipes, cost recording, simple packaging, and periodic market testing.

Supporting and Inhibiting Factors of the Program

The successful implementation of the program was influenced by supporting factors derived from the village's characteristics and community involvement. Purwahamba has social capital in the form of organizations such as PKK, Karang Taruna, neighborhood and community units, Posyandu, and BUMDes. The existence of these organizations can serve as a basis for coordination, community mobilization, and program follow-up. In addition, the community is already familiar with productive activities in the fisheries, agriculture, and household business sectors, so creative economy training was relatively easy to understand as part of strengthening family income.

However, several inhibiting factors need to be discussed critically. First, residents' skills in processed food production were still at an initial stage, so repeated practice is needed. Second, packaging and branding abilities were not yet fully developed. Third, marketing was still limited to village shops and therefore did not yet reflect significant market expansion. Fourth, ice cream products face storage and distribution challenges because they require cold temperatures. Fifth, there were no data on repeat purchases or consumer responses over a specific period. Thus, the program succeeded in building an initial foundation, but still requires further mentoring cycles so that the product can develop into a more stable business.

Program Implications and Replication Potential

This program has practical implications as an initial model of village creative economy empowerment based on simple processed food products. This model can be replicated in other villages because it does not depend on complicated technology and can be adjusted to the local potential of each area. However, program replication needs to consider four main requirements: material availability, resident readiness, storage facilities, and local marketing channels. Without these four elements, production training risks producing only temporary outputs.

In terms of program development, future community service programs need to be directed toward strengthening product standardization, packaging, branding, simple legality, production cost recording, and digital promotion. This recommendation is important because products that can already be made are not necessarily ready to compete without brand identity and better quality management. The program also needs to involve the village government, BUMDes, PKK, or local business groups as sustainability facilitators. Thus, community service programs can move from the product demonstration stage toward the formation of small community-based business units.

Limitations of Community Service Implementation

Although the program showed positive results, the implementation of this community service program had several limitations. First, the visible results were still dominated by outputs and initial outcomes, while medium-term economic impacts had not yet been documented. Second, data on the number of residents who were actually able to reproduce the product independently still need to be completed. Third, data on the number of shops that accepted the product and initial market responses still need to be clarified based on field notes. Fourth, no longitudinal monitoring was available regarding production consistency, sales volume, repeat purchases, and income growth. Fifth, the use of video tutorials as a sustainability medium had not been specifically evaluated. Therefore, this community service program can be considered successful as a creative business initiation stage, but cannot yet be claimed as evidence of sustainable economic success.

Conclusion

The implementation of the community service program in Purwahamba Village shows that creative economy development based on simple processed products can be a relevant and applicable strategy for community empowerment. The program, which integrated ice cream

production, simple cooling equipment, video tutorials, and initial marketing to village shops, produced tangible outputs in the form of processed products, independent learning media, simple production facilities, and initial distribution channels. The activity results also showed initial outcomes in the form of increased residents' understanding of the production process, cooling equipment use, basic packaging, and the importance of local marketing.

Nevertheless, the program achievements need to be understood proportionally. This program successfully strengthened the community's initial capacity and built a foundation for creative business, but it cannot yet be claimed as having medium- or long-term economic impact. This is because data on production consistency, the number of residents who independently reproduced the product, sales volume, repeat purchases, and income growth had not been adequately documented. Thus, the program results are more appropriately positioned as the initiation stage and initial capacity strengthening of the village creative economy.

The main strength of the program lies in its simple, contextual, and replicable approach. The introduced product is relatively easy to make, the equipment used is simple, and the video tutorial provides opportunities for residents to relearn the process. However, program sustainability still depends on further mentoring, especially in taste standardization, packaging, branding, production cost recording, storage, and market expansion. Therefore, program follow-up needs to involve the village government, BUMDes, PKK, or local business groups so that the training results do not stop at one-time activities, but develop into more stable productive enterprises.

Based on the program results, partners are advised to continue production practice gradually and consistently by paying attention to taste quality, hygiene, texture, packaging, and product durability. Residents also need to use the video tutorial as a relearning medium so that production skills can be maintained and shared with other community members. The village government, BUMDes, PKK, and local community institutions are encouraged to take roles as sustainability facilitators through the formation of small business groups, packaging mentoring, and the opening of access to local marketing. For future community service implementers, programs should not stop at production training, but should be continued with mentoring in branding, labeling, simple legality, digital promotion, cost recording, and sales monitoring. Program evaluation also needs to be made more measurable using indicators such as the number of residents able to reproduce the product, the number of products produced, the number of shops accepting the product, consumer responses, sales volume, and household income. With this approach, community service programs will not only produce temporary outputs, but also encourage the formation of a more independent, productive, and sustainable village business ecosystem.

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Research Ethics Statement

This community service program was conducted in accordance with the ethical principles of community-based academic activities, including respect for participants, voluntary participation, transparency, accountability, and research integrity. Since the program focused on community

empowerment, ice cream production training, simple cooling equipment use, video tutorial development, product documentation, initial local marketing, observation, and descriptive program evaluation, it did not involve clinical intervention, biomedical procedures, biological specimens, or the collection of sensitive personal health data. Participants and community partners were informed about the purpose, procedures, and expected outputs of the activities before implementation. Participation in training, production practice, mentoring, reflection, and initial marketing activities was voluntary. The data used in this article were limited to program records, observation notes, skill achievement records, production documentation, product documentation, mentoring notes, and initial marketing records. All information was used responsibly while maintaining respect for participant confidentiality and the community context.

Author Contributions

Mujayanti: conceptualization, coordination of the community service program, development of the creative economy intervention design, supervision of implementation, analysis of program outputs and initial outcomes, and writing of the original draft.

Ajeng Wijayanti: preparation of community empowerment materials, support for participant coordination, assistance in production training, and contribution to manuscript review.

Dimas Prana Alimukti: field observation, coordination with village partners, identification of initial community needs, and documentation of program implementation.

Anandya Noor El Fathira: preparation of ice cream production materials, support for hands-on practice activities, and assistance in observing participant involvement during production.

Wulida Ayuningtias: development and testing of simple cooling equipment, guidance in equipment use, and contribution to the evaluation of participants' practical skills.

Devi Larasati: mentoring of residents in basic packaging, product appearance, hygiene awareness, and preparation for initial product introduction to local shops.

Adam Bill Arba: technical support for video tutorial development, digital documentation, and preparation of independent learning media for residents.

M. Tirto Sanyoto: support for initial local marketing, coordination with village shops, recording of market responses, and documentation of product distribution activities.

Tegar Gagah Aditya: data recapitulation, preparation of program achievement tables, organization of observation and mentoring notes, and contribution to descriptive data analysis.

Muhamad Fatih Idris: critical review of program implementation, validation of descriptive interpretation, manuscript editing, and finalization of the article.

All authors have read, reviewed, and approved the final version of the manuscript.

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Conflict of Interest

The authors declare that there is no conflict of interest regarding the implementation, authorship, or publication of this article.

Artificial Intelligence Use Statement

The authors declare that artificial intelligence was used only as a limited technical support tool for language editing, sentence refinement, grammar checking, translation assistance, and improving manuscript readability. All processes involving program planning, partner coordination, activity implementation, production practice, video tutorial development, data collection, observation, descriptive evaluation, academic interpretation, and conclusion development remain the full responsibility of the authors.

Data Availability Statement

The data supporting the findings of this article consist of community service program documents, activity reports, observation notes, participation records, skill checklist results, production process notes, product documentation, video tutorial documentation, mentoring notes, initial marketing records, and descriptive evaluation notes related to village creative economy empowerment through ice cream production in Purwahamba Village. Due to participant confidentiality and ethical considerations in community-based activities, complete raw documentation is not publicly available. Additional information regarding the program implementation and evaluation procedures may be obtained from the corresponding author upon reasonable request.

References

- Asih, R. N., Rizki, I., Sejati, H., Kholik, A., & Khanifah, N. U. (2023). Pemberdayaan ekonomi kreatif masyarakat melalui pengolahan makanan tradisional jemblem dan makanan modern corn dog di Desa Wonoroto. *Varia Humanika*, 4(1), 59–64. <https://doi.org/10.15294/vh.v4i1.64063>
- Duea, S. R., Zimmerman, E. B., Vaughn, L. M., Dias, S., & Harris, J. (2022). A guide to selecting participatory research methods based on project and partnership goals. *Journal of Participatory Research Methods*, 3(1). <https://doi.org/10.35844/001c.32605>
- Fiorella, L. (2021). Multimedia learning with instructional video. In R. E. Mayer & L. Fiorella (Eds.), *The Cambridge handbook of multimedia learning* (3rd ed., pp. 487–497). Cambridge University Press. <https://doi.org/10.1017/9781108894333.050>
- Hermiatin, F. R., Handayati, Y., Perdana, T., & Wardhana, D. (2022). Creating food value chain transformations through regional food hubs: A review article. *Sustainability*, 14(13), Article 8196. <https://doi.org/10.3390/su14138196>
- International Fund for Agricultural Development. (2021). *Transforming food systems for rural prosperity: Rural development report 2021*. IFAD.
- Kidder, D. P., Chapel, T. J., Grigorescu, V., LaPelle, N., Adinolfi, M., Edmiston, A., & Piesse, A. (2024). CDC program evaluation framework, 2024. *MMWR Recommendations and Reports*, 73(6), 1–37. <https://doi.org/10.15585/mmwr.rr7306a1>
- Organisation for Economic Co-operation and Development. (2021). *Jobs for rural youth: The role of local food economies*. OECD Publishing.
- Sarasi, V., Yulianti, D., & Saefulhadjar, D. (2025). Pengembangan ekonomi kreatif berbasis tepung mocaf di Sindangsuka, Garut untuk ketahanan pangan dan pengurangan stunting. *Kumawula: Jurnal Pengabdian Kepada Masyarakat*, 8(2), 531–539. <https://doi.org/10.24198/kumawula.v8i2.58932>
- Setyaningrum, D., & Septiani, I. Y. (2021). Peningkatan kreativitas masyarakat melalui pengolahan jagung di Desa Kumpulrejo Kecamatan Parengan Kabupaten Tuban. *Kumawula: Jurnal Pengabdian Kepada Masyarakat*, 4(1), 74–78. <https://doi.org/10.24198/kumawula.v4i1.31211>
- Stöber, S., Alrøe, H. F., Beber, C. L., Schneider, M., & Schäfer, M. (2024). Editorial: Transformative food value chains for local development. *Frontiers in Sustainable Food Systems*, 7, Article 1358908. <https://doi.org/10.3389/fsufs.2023.1358908>

Sulistyawati, V. N., Naima, A., & Fitriani, L. (2022). Inovasi pengolahan ikan bandeng menjadi nugget untuk meningkatkan UMKM Desa Ketapang. *Jurnal Bina Desa*, 4(3), 375–381. <https://doi.org/10.15294/jbd.v4i3.39393>