

IMPLEMENTATION OF LIFE SKILLS EDUCATION THROUGH THE HYDROPONIC PROGRAM FOR THE COMMUNITY IN RT 27, TELUK LERONG ULU SUB-DISTRICT, SAMARINDA CITY

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Abstract

This study aims to describe the implementation of life skills education through a hydroponic program in RT 27, Teluk Lerong Ulu Village, Samarinda City. The program is a collaboration between local residents and Pertamina's CSR initiative to improve community skills in modern farming. The research used a descriptive qualitative approach with interviews, observations, and documentation. Participants included members of the "Pojok Tani" and active residents. The results show that: (1) planning was conducted collaboratively with equipment support; (2) implementation involved seed preparation, maintenance, harvesting, and product marketing; and (3) evaluation was conducted through harvest monitoring and community reflection. The program successfully enhanced residents' life skills in personal, social, and promoting economic independence and community empowerment.

Keywords: Implementation, Life Skills Education, Hydroponics

Abstrak

Penelitian ini bertujuan untuk mendeskripsikan implementasi pendidikan kecakapan hidup melalui program hidroponik di RT 27 Kelurahan Teluk Lerong Ulu, Kota Samarinda. Program ini merupakan hasil kolaborasi antara masyarakat dengan CSR Pertamina untuk meningkatkan keterampilan warga dalam bercocok tanam secara modern. Metode penelitian yang digunakan ialah kualitatif deskriptif dengan teknik pengumpulan data melalui wawancara, observasi, dan dokumentasi. Subjek penelitian meliputi pengurus Pojok Tani serta warga yang aktif dalam program hidroponik. Hasil penelitian menunjukkan bahwa (1) perencanaan dilakukan secara partisipatif bersama masyarakat dan pihak perusahaan, meliputi penyediaan sarana dan pendampingan; (2) pelaksanaan mencakup kegiatan pembibitan, perawatan, panen, dan pemasaran hasil tanaman; (3) evaluasi dilakukan melalui pemantauan hasil panen dan refleksi pembelajaran masyarakat. Program hidroponik terbukti meningkatkan kecakapan hidup masyarakat dalam aspek personal dan sosial, serta memperkuat semangat gotong royong dan kemandirian ekonomi warga.

Kata kunci: Implementasi, Pendidikan Kecakapan Hidup, Hidroponik

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INTRODUCTION

Urban agriculture is a strategic solution to address the challenges of limited land and increasing food demand in urban areas in Indonesia. According to data from the Central Statistics Agency (BPS, 2023), more than 12,900 households and 13,000 individual agricultural businesses in

urban areas utilize limited land through modern agricultural technologies such as hydroponics, aquaponics, and vertical farming. This phenomenon demonstrates growing public interest in sustainable and environmentally friendly agriculture, particularly in densely populated urban areas.

Hydroponics, as a modern agricultural innovation, has proven to be efficient in water and space use. Research by Ibrahim, et al. (2025) shows that hydroponic methods can produce up to twice the vegetable yield compared to conventional methods, with water efficiency reaching 80%.

From a community education perspective, hydroponic programs not only provide economic benefits but also serve as an applicable learning medium in developing life skills. Life skills are an individual's ability to think critically, communicate, adapt, and manage themselves effectively in facing life's challenges (Anwar in Ifnaldi, 2021). Research by Renata, et al. (2023) found that a community service study that assessed simple hydroponic training for community empowerment was suitable as a comparative study for aspects of training and implementation effectiveness. Meanwhile, a study by Purwani (2023) showed that hydroponic activities in PAUD institutions can be a means of instilling an entrepreneurial spirit from an early age.

However, most of this research focuses on formal education (schools) or early childhood contexts, while the application of life skills through hydroponic programs in the general community remains sparse. (Mandamdari & Rokhiminarsi, 2021), for example, examined the implementation of life skills education in special needs schools through hydroponics, but has not yet explored the dynamics of implementing similar programs in the context of empowering adults in urban environments. This research gap highlights the need for more in-depth studies on how communities practice, manage, and benefit from hydroponic programs to improve their life skills.

Empirically, the community of RT 27, Teluk Lerong Ulu Village, Samarinda City, has been implementing a community-based hydroponic program for over a year with the support of Pertamina's Corporate Social Responsibility (CSR). This program not only aims to improve local food security but also develops community skills in modern agricultural business management. However, the effectiveness of this program's implementation in developing residents' life skills, particularly in the planning, implementation, and evaluation aspects of activities, has not been widely scientifically studied.

Based on these conditions, this study is important to analyze the implementation of life skills education through a hydroponic program for the community of RT 27, Teluk Lerong Ulu Village, Samarinda City. Specifically, this study aims to: (1) describe the planning process for a life skills-based hydroponic program; (2) explain the implementation of hydroponic activities as a means of community learning; and (3) identify the results and evaluation of program implementation in improving residents' life skills.

METHODS

This study employed a descriptive qualitative approach, with the researcher as the primary instrument and actively participating throughout the entire research process. Data were collected through in-depth interviews, participant observation, and documentation to obtain a comprehensive picture of the implementation of life skills education through a hydroponic program. The study subjects consisted of the administrators of Pojok Tani RT 27 and residents who actively participated in the hydroponic program in Teluk Lerong Ulu Village.

In-depth interviews were conducted to gather information related to the planning, implementation, and evaluation of hydroponic activities, as well as residents' experiences in developing life skills through the program. Through participant observation, researchers were directly involved in field activities such as planting, caring for, and harvesting hydroponic plants to understand the social dynamics and learning patterns occurring among residents. Furthermore, documentation was used to supplement the data through the collection of activity photos, field notes, and program administrative archives, providing empirical evidence for the interview and observation results.

The selection of research subjects, the managers of Pojok Tani and residents of RT 27, Teluk Lerong Ulu Subdistrict, was based on their relevance and direct involvement in the hydroponic program. Meanwhile, RT 27 residents were selected because they are active participants in the hydroponic program and directly experience the learning process and application of life skills through these activities.

Data analysis was conducted inductively through data reduction, data presentation, and conclusion drawing according to the Miles and Huberman (2014) model. To ensure data validity, researchers used source and method triangulation techniques, namely by comparing the results of interviews, observations, and documentation to obtain valid and reliable findings.

RESULTS AND DISCUSSION

Planning was carried out in a participatory manner, involving the community and Pertamina's CSR program. The stages included basic hydroponic training, seed provision, system installation, and planting location determination. This approach aligns with the principles of andragogy in community education (Knowles, 1984), which emphasize participation and experience as learning tools.

Program Implementation: Hydroponic activities included seeding, maintenance, harvesting, and marketing. The community learned how to manage plant nutrients, control pH, and maintain plant cleanliness. In addition to technical skills, residents also demonstrated improvements in group work, time management, and shared responsibility.

Program evaluation and impact are conducted periodically through reflective discussions and harvest monitoring. Interviews indicate that residents have experienced tangible benefits: increased environmental awareness, modern farming skills, and economic opportunities from selling fresh vegetables. Another social impact is increased solidarity and a sense of ownership of the surrounding environment.

These results indicate that hydroponics-based life skills education not only produces practical knowledge but also values of independence, responsibility, and collaboration. These findings support the research findings of Purwani (2023) and Renata, et.al, (2023) which state that hydroponics is effective as a medium for community-based life skills learning.

Impact of the Program on Life Skills, The results of the study show that the hydroponic program has a multidimensional impact on improving the community's life skills, including personal and social aspects: (1) Personal skills: residents become more disciplined, meticulous, patient, and responsible in group tasks. (2) Social skills: improved communication and collaboration skills, as well as a sense of togetherness among residents. Furthermore, the

environmental impact is also significant. The surrounding environment becomes greener, cleaner, and more productive. Residents utilize empty land and yards to grow vegetables such as mustard greens, kale, and lettuce using a simple hydroponic system.

Economically, residents earn additional income from selling their crops in the surrounding area. Some have even started developing their own hydroponic systems at home. This demonstrates that the program not only serves as training but also fosters economic independence based on life skills.

Analysis of Results Based on Theory: The findings of this study support (Anwar's 2021) theory, which states that life skills education includes key components: personal skills and social skills. The hydroponic program has proven to be an effective platform for integrating these components. The learning process occurs naturally through hands-on practice and collective experience. Furthermore, the application of community-based learning principles in this program strengthens social relationships among residents and builds strong solidarity. Communities learn not only for their own benefit but also for the common good.

Research findings indicate that the implementation of life skills education through the hydroponics program in Neighborhood Association (RT) 27 aligns with the basic principles of life skills education, namely experiential learning. Through direct involvement in hydroponics activities, residents have the opportunity to learn by doing, which strengthens personal, social, and vocational skills.

In the planning stage, active community involvement demonstrates community participation in the learning process. As Anwar in (Ifnaldi, 2021) argues, life skills education must foster critical thinking and environmental adaptation. Residents learn to design activities based on local needs and potential, which forms the basis for developing critical thinking and independent planning skills.

The implementation phase demonstrates how hydroponic activities serve as a vehicle for developing social and vocational skills. Cooperation among members, division of tasks, and communication within the group reflect naturally developing social skills. These findings align with research (Renata, E. et al, 2023), which shows that simple hydroponic training not only improves residents' technical skills but also strengthens their social and economic independence.

The evaluation phase serves as a reflective process that strengthens personal skills, particularly problem-solving and decision-making abilities. Discussions among group members help residents find solutions to technical obstacles and improve the quality of subsequent harvests. This supports the idea that hydroponic activities encourage continuous community learning and adaptation to the challenges of modern agriculture.

Thus, the implementation of the hydroponic program in RT 27 has not only successfully increased plant productivity but also effectively served as a means of community education. This activity encourages residents to actively participate, think critically, and be independent, in line with the primary goal of life skills education within the context of community empowerment.

CONCLUSION

The implementation of life skills education through a hydroponics program in RT 27, Teluk Lerong Ulu Village, has been quite successful, following three main stages: planning, implementation, and evaluation. This program has successfully improved residents' personal, social, and entrepreneurial skills. In addition to serving as a non-formal educational tool, hydroponics also serves as a sustainable and environmentally friendly means of community empowerment.

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