
Empowerment of Rural Communities Through Information Technology (IT) Training for Teenagers

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Abstract

Community Service Activities in utilizing IT for adolescents use simple media. The head of Bulu Mario Village provides opportunities for the community to enhance their knowledge and economy. IT training was chosen because it has several advantages, including the fact that the majority of adolescents have smartphones, making it easier for the community to market their products. The aim of the community service in Bulu Mario Village is to empower the community with Information Technology (IT) skills and abilities, helping them thrive in an increasingly IT-integrated modern era. Additionally, this program aims to build sustainable growth in Bulu Mario Village. The implementation of the community service uses the Participatory Action Research (PAR) method, which involves the participation of all stakeholders. The activities in this community service include data collection, counseling, training, and evaluation. The results of this service show that the program successfully increased literacy among the village community, especially adolescents. With IT, the community can engage in e-commerce, digital financial services, and various other online platforms, all of which contribute to inclusive economic growth, thereby making the community more prosperous. The impact of this program is that adolescents are able to boost their confidence in adopting and using IT to improve the quality of life in Bulu Mario Village, particularly for themselves, in creating opportunities for economic well-being.

Keywords: Information Technology, Adolescents, Community Empowerment

INTRODUCTION

The rapid advancement of technology and information is reshaping the social, economic, and cultural landscape of communities worldwide. Amidst the IT revolution, villages across Indonesia are encountering new opportunities and challenges. One strategy to address these challenges and capitalize on existing opportunities is by empowering communities through the implementation of "IT Training" initiatives. This approach integrates digital technology with education to enhance the quality of life and adaptability of rural communities in the technology era. Technological transformation has resulted in significant changes in how we live our lives (Fitri Annisa et al., 2022).

The influence of digital technology has already altered how we work, learn, communicate, and interact with the environment around us. However, not everyone worldwide can experience its benefits. In many rural areas, limited access to digital technology remains a problem, and residents may lack the knowledge or skills to effectively utilize it (Muhasim, 2017).

One step to address this inequality is by implementing "IT Training" programs. This concept encompasses programs aimed at empowering rural populations with knowledge and

skills related to digital technology (Basit et al., n.d.). Beyond merely providing training on hardware and software usage, these programs also include education on how technology can improve daily life quality and create economic opportunities in villages (Rachmi et al., 2024).

Community empowerment is a key principle in the IT Training concept, meaning providing education and training to rural communities so they can take an active role in the development and use of digital technology (Sri Mulatsih et al., 2023). Empowering communities is one of the concepts in community service, one of which is First, IT Training: communities need to be trained in the use of laptops, smartphones, and other digital devices. Especially teenagers need to understand the basics of using smartphones for important matters in village development (Ridwan et al., 2019). Second, Economic Improvement: One of the main focuses of Digital Education Villages is to improve economic conditions in villages (Abdillah & Sholihah, 2023). This effort involves providing training to villagers to develop online businesses, digitally market local products, and find job opportunities in the technology sector.

The success of IT training can be measured by several indicators including Community Participation, Participation of the community in programs, such as attending training and adopting the use of digital technology in daily activities, can also be a measure of program success. Additionally, local economic development such as increased business opportunities and local business growth, is another important indicator (Training & Sampah, 2023).

The Community Service in Bulu Mario village is one of the villages that have implemented an effective approach to address access and knowledge gaps in the technology era. By empowering rural communities with knowledge and skills in digital technology, we can help them benefit from advances in information and communication technology (Rahim et al., 2023). Thus, Bulu Mario Village not only assists rural communities in adapting to technological changes but also stimulates sustainable growth and development at the local level.

The goal of community service is to empower rural communities with digital technology skills and knowledge, help them adapt to the technology era, and promote sustainable growth and development at the local level (Nurahman et al., 2023). It is hoped that this community service will have significant impacts and benefits in realizing IT Training in the technology era. One very tangible impact is the increase in digital literacy among rural residents. Through the training and education provided, those who previously had limitations in using digital technology have now gained sufficient knowledge and skills to use it confidently (Literacy et al., 2021). This opens up greater access to information, education, and economic opportunities for the Bulu Mario community.

RESEARCH METHODS

The implementation of community service applies the Participatory Action Research (PAR) method, which differs from conventional scientific approaches. This community service is carried out in Bulu Mario village, Sipirok District, South Tapanuli Regency, North Sumatra Province. The PAR method requires active involvement of the community in analyzing and

executing all ongoing activities, with the aim of evaluating and improving future changes (Santi Indra Astuti & Juli R. Binu, 2022). These activities include data collection, counseling, training, and evaluation in Bulu Mario Village. Implementation in the field involves teenagers in conducting IT training, and the community service method can be an effective tool in achieving this goal by involving various stakeholders.

RESULTS AND DISCUSSION

Community service aiming to realize IT Training in the technology era is a collaborative effort involving various parties. This activity is conducted to empower rural communities to adopt IT in their daily lives and enhance their quality of life through empowerment programs tailored to their needs. The following are the results of IT training for teenagers in Bulu Mario village.

Identification of Local Needs

The initial stage of this project is to identify the technology and education needs in the targeted village. By conducting surveys and interviews with local residents, we successfully gathered important data needed to design empowerment programs tailored to their needs.

Formation of Service Team

After identifying the local needs, we formed a service team consisting of lecturers, students, and technology experts. This team has various skills relevant to the project's goals and is committed to making a positive contribution to the development of the village.

Training and Education

The service team organized a series of training and education sessions on IT usage for teenagers. This training includes:

1. **Basic Technology Training:** We provided basic training on computer usage, internet usage, and common software to the villagers.
2. **Digital Education:** In addition to technical training, we provided education on the benefits of IT in various aspects of life, including education, health, agriculture, and business.
3. **Special Skills Development:** We provided specialized skills training tailored to the interests and needs of the community, such as using IT to market products owned by the villagers in Bulu Mario village.

Development of Local Resources

To support the adoption of digital technology, we collaborated with local governments and local partners to build the necessary infrastructure. This includes establishing internet access centers and computer rooms in the village.

Mentoring and Evaluation

Throughout the project, the service team provided mentoring to the community in integrating IT into their daily lives. We also conducted periodic evaluations to monitor progress and identify areas that need improvement. This allows us to adjust the program to evolving needs.

Measurement of Success

The success of this project can be measured through various indicators, including :

1. IT Improvement: There has been a significant increase in IT proficiency among teenagers in Bulu Mario village, as reflected in their ability to confidently use IT.
2. Increased Internet Access: The number of households with internet access has significantly increased, providing the community with access to online resources.
3. Local Economic Growth: There has been an increase in local economic opportunities, such as the success of online businesses and the growth of local businesses.
4. Community Participation: The village community actively participates in IT programs and contributes to the development of local content.



Figure 1. IT Training in Bulu Mario Village

Through the community empowerment approach, the service team has successfully empowered villagers in implementing IT training for teenagers. Now, teenagers in Bulu Mario Village have the knowledge and are proficient in using IT according to their needs. In the effort to realize skilled IT, the community service team has conducted interviews with several village members who have been involved in this program.



Figure 2. Implementation of IT Training

One of the interviews we conducted was with Halima, a teenager in the village of Bulu Mario who previously had little experience in using IT. Halima recounted how the community empowerment program had changed the way she and her family interacted with technology. "Initially, I didn't know much about using a smartphone," she said. "But with training and guidance from the service team, I can now use a smartphone to find very useful information for my business. I even started selling my parents' agricultural products online, which I hadn't thought of before." Additionally, Nurlina, another teenager in the village, also shared her positive experience. "Before, I only used a smartphone for calls and text messages," she said. "Now, I am learning to use apps to help my younger siblings with online learning. This opens up new opportunities for their education." We also spoke with Andre, a teenager in the village who had developed a simple app to assist local farmers. "The service team provided technical support and understanding of how to develop the app," said Andre. "I am very happy to be able to contribute to my community in this way."

From several interviews above, it is evident how the community empowerment program has brought positive changes in the daily lives of the villagers of Bulu Mario. They are now more confident in using digital technology, enhancing economic opportunities, and actively engaging in IT development. This program not only provides access to technology but also encourages positive changes in how communities adopt and utilize technology in this increasingly digital era.

The community empowerment program to realize IT has had a significant positive impact on improving the quality of life and adaptive abilities of rural communities in the technology era. Based on interviews with various community members and teenagers involved

in the program, several key aspects can be analyzed. Firstly, the program successfully tackles IT challenges. Many rural residents initially had little or no knowledge of IT usage. However, through the training and mentoring provided by the service team, they can overcome their lack of confidence in facing technology. This creates a strong foundation for more effective technology use in daily life.

Secondly, the program encourages the use of IT for educational and economic purposes. Village communities are beginning to recognize the potential of IT in improving access to education and economic opportunities. They utilize internet access and educational applications to assist their children in online learning, and some even start selling agricultural products online. This reflects the importance of a holistic approach in empowerment programs, which not only introduce technology but also provide an understanding of how to use it for personal and community benefit.

Thirdly, the program creates strong collaborations among various parties, including universities, government institutions, and external partners. This collaboration expands the resources available to rural communities and provides access to additional knowledge and support. This is an essential element in ensuring the sustainability of this program and creating sustainable long-term impacts.

Community empowerment programs with a focus on IT skills in the technology era are highly relevant and strategic steps in facing the ongoing challenges of digital transformation. The results of this program reflect the importance of collaborative and targeted efforts in enabling rural communities to reap the full benefits of IT. Here is an in-depth analysis of several key aspects of the results of this service:

1. **Education and Economic Development:** This program also helps bridge education and economic development. Village communities are not only taught how to use technology but also how this technology can be used for educational purposes and creating economic opportunities. Initiatives such as training for online businesses and the development of local applications by community members demonstrate how digital technology can serve as a catalyst for local economic growth.
2. **Collaboration and Community Participation:** The success of this program is reflected in the close collaboration among various stakeholders, including universities, government, and external partners. This collaboration enables the provision of additional resources and access to relevant technological knowledge. Furthermore, active community participation in this program is also a crucial factor. They are not just recipients but also contributors to the development and implementation of digital initiatives.
3. **Measurement of Success and Sustainability:** This program has identified relevant success indicators and conducts systematic monitoring. Measuring success is a crucial element to ensure the effectiveness of this program. Additionally, the program also needs to focus on long-term sustainability. Building community capacity to independently adopt and utilize IT is the next important step.

Overall, the community empowerment program to realize IT training for teenagers has laid a strong foundation for improving the quality of life in rural communities in the technology era. This is a positive example of how collective efforts can overcome digital inequality and bring about positive change in communities. Rural communities, previously marginalized by

the digital technology revolution, now have equal access to urban communities, creating more equitable and inclusive opportunities in the development of global technology.

CONCLUSION

Community service in realizing Rural Community Empowerment through Information Technology (IT) Training for Adolescents has proven that focused collaboration can result in significant changes in rural communities. This program successfully enhanced IT skills, linked education with economic development, and stimulated cross-sector collaboration. As a result, rural communities are more confident in utilizing IT to improve their quality of life and create economic opportunities. This approach also emphasizes the importance of concrete success measurements and a focus on program sustainability as an integral part of the project's success. The success of this program highlights the critical role of community empowerment in addressing the challenges of digital transformation, ensuring that no one is left behind, and creating more inclusive and competitive villages in the technological era.

One of the shortcomings of this community service is the limitation in measuring long-term impact. Although the program has successfully achieved several success indicators, long-term evaluation of the sustainability of changes over a longer period remains a challenge that needs to be addressed. Therefore, further research should focus on measuring long-term impacts, including whether IT improvements persist and whether local economic growth can be sustained. The utilization of Information Technology can empower the community's economy by increasing information accessibility, expanding markets, improving operational efficiency, and creating new business opportunities. With IT, the community can engage in e-commerce, digital financial services, and various other online platforms, all of which contribute to inclusive economic growth, thereby making the community more prosperous.

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