

# Technology literacy education based PHP2D local wisdom program in Cicadas village Indonesia

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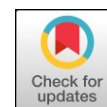
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## ABSTRACT

The activity called PHP2D Tali Rafika (Literacy Park Based on Local Wisdom) in Cicadas Village aims to provide education to residents about technological literacy that can be used to improve the welfare of residents. This activity was motivated by the condition of the partner villagers who had not been able to take full advantage of technology. The method used in this activity is in the form of training which contains the theory and practice of utilizing social media such as YouTube, Instagram, and Facebook as media for marketing citizen products. The tools used in this training include portable computers, wifi, devices, and slides. The results of the training show an increase in citizens' technological literacy skills, which is indicated by the ability of citizens to use social media as a means of improving their welfare



## KEYWORDS

PHP2D

Technology literacy

Social media



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## 1. Introduction

The pace of world development is now entering the gates of Society 5.0. Citizens of the world, including Indonesia, must be prepared to adapt or be run over. Society 5.0 is a compromise of artificial intelligence 4.0 with society. In this era, technology is used to provide benefits for humans in overcoming their social problems. All elements such as humans, objects, and systems are connected in a virtual space for further benefit in the real world [1]. In the face of that era, of course, the people of Indonesia need to improve. One of the preparations in dealing with it is of course through education. However, what happens if members of the community are constrained in studying because of the location, cost, and human resources factors. The definition of poverty is no longer only related to the problem of income inequality, but has expanded into the issue of incapability, lack of knowledge and skills, and the scarcity of access to capital and resources [2], or what Fredman called human capability [3]. Thus, it becomes clear that to be free from such conditions, we need an education. Agricultural commodities are managed by the community in Cicadas Village in the form of rice, lemongrass, and tea. Lemongrass plants are usually processed again by the community into lemongrass oil. Of course, these agricultural products could be sufficient for the needs of the citizens, if only they owned the land they managed. Most of them are farmworkers, so their income is determined by the landowner. They have not been able to use technology to improve their well-being. The sale of their processed products depends only on the collector. The results of the interview show that the pricing of the sale of lemongrass oil depends entirely on the price set by the collectors. Those lemongrass oil refiners never try to market their products or try to figure out the number of oil prices they produce on a wider scale. Based on the analysis of circumstances, it is expected that through a Holistic Program of Village Development and Empowerment entitled TALI RAFIKA (Taman Literasi Berbasis Kearifan Lokal/ Local Wisdom-Based Literacy Park) in Cicadas Village, Cavity, West Bandung, can contribute to the scope of education.

Holistic Village Development and Empowerment Program is a program of the Ministry of Education and Culture under the Directorate General of Learning and Student Affairs, which aims to help overcome problems in the village in various aspects, through efforts to increase awareness/attitude, as well as insight/knowledge, and skills. The team conducted technology literacy education, namely an understanding of the working procedures of machines and technology applications. The team will conduct social media utilization training such as Facebook, Instagram, or Youtube as a means that can be used to market local products of assisted villages. Home lemongrass oil entrepreneurs are expected to market their products directly to consumers as well as advertise their products using social media. They are also expected to use social media to obtain important information related to their product, so it is expected that it can improve the quality of their products. Thus, this program can not only increase the knowledge of the target villagers, but is also expected to alleviate poverty in the sense of incapability, lack of knowledge and skills, and scarcity of capital and resources. Technology literacy education is conducted to improve technology literacy for residents and coral cadets Cicadas Village, Cavity, West Bandung, to improve knowledge and ability in understanding information in the field of technology, especially social media. Therefore, it is expected that there is awareness and involvement of assisted villagers and karang taruna in social media operation training, to improve technology literacy to increase the promotion of local wisdom to the maximum.

## 2. Method

PHP2D technology literacy training program was conducted for 4 months, namely from August to November 2020 in Cicadas Village, Rongga, West Bandung. This activity involved 10 students with one lecturer, as well as working with elements of the village, namely *Karang Taruna* Tazi Malela. The tools used in this activity are portable computers, gadgets, wifi, internet, *salindia*, and *infocus*, and are held in the Multipurpose Building of Cicadas village. Activities are organized based on the flowchart [Figure 1](#). The method used in survey activities is through interviews, which are conducted offline and online. The offline survey was conducted by one of the students by interviewing with the village secretary, while an online interview was conducted with members of *Karang Taruna* Tazi Malela conducted through the WhatsApp group. The implementation stage of the activity is carried out offline which is divided into two sessions. Implementation activities are carried out in the form of training and question and answer so that participants easily understand the concept of technology and can practice it for their needs. After the implementation activities, theoretical training and practice are conducted by students accompanied by supervisors. At the end of the activity, the team evaluated by spreading the questionnaire to participants to measure the indicators of success.

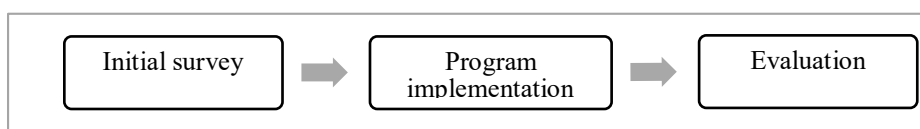


Fig. 1. Flow Chart of the Activity

## 3. Results and Discussion

### 3.1. Initial survey

The initial survey was conducted by one of the teams in August 2020. In this activity, Tim interviewed a village officer, namely the village secretary, to identify problems in the village. From the results of the interview, it was identified that the problem in the village is the low level of technology literacy of citizens and the lack of technology utilization for people's lives, especially to support the home industry managed by citizens.

### 3.2. Implementation

The implementation of the activity is carried out by mixed methods, both offline and online.

### 3.2.1. Offline Implementation

At the implementation stage, the team provides training for the target citizens to be able to use and utilize social media such as Instagram, Facebook, and Youtube to promote local products. All citizens can join this program as a means of improving themselves to become literate in technology that can be used to improve the welfare of citizens. Technology literacy skills and community welfare are two things that are interconnected [4]. This is evidenced by Juditha, in her research, which found that Makasar's high level of literacy helped to succeed in government programs and improve people's welfare [5]. The activity began with registration and filling of questionnaires, which was accompanied by a video display containing a picture of UNINDRA's profile and a glance at PHP2D TALI RAFIKA. The opening of the workshop can be seen in Figure 2.



Fig. 2. Opening workshop Blog Training

- Session I: The team began explaining the first material on the description and basis of the material on the website and social media, by showing a copy of it. Afterward, the event continued with material exposure about creating a Gmail account and how the blog operates. The techniques used in this session are theory and practice. Each time the team explains a theme, it is immediately followed by direct practice by the participants, accompanied by the entire team. Through this technique, the obstacles that may be encountered will be immediately overcome. Ross, in his research, showed that simulation offers a fresh approach to psychomotor skills education allowing the student to integrate knowledge from all three learning domains while practicing the skill [6]. This is important because the operation of the device also requires synchronization between cognitive and psychomotor. This is also done by research Ozden. This study aims to determine the effect of science learning based on the Common Knowledge Construction Model (CKCM) on cognitive and psychomotor learning in seventh-grade students. The results presented a statistically significant difference [7].
- Session II: After ice breaking, the next material is social media training in the form of Facebook, Instagram, Youtube, and Tokopedia. In this activity, the team asked participants to check the existence of social media accounts belonging to Cicadas Village and conduct a briefing on the application of the four social media platforms. The session also used theoretical and practical techniques.
- Session III: Contains an evaluation of activities through FGD and filling out questionnaires to measure participants' technological literacy skills after being given education. FGD (Forum Group Discussion) is a qualitative research method in social sciences, first developed by Robert K Merton in 1940, by forming a group of respondents to explore information and solve various problems that are considered difficult [8]. FGD also has the advantage of synergism, provoking a chain reaction that allows the emergence of new ideas, simultaneously, individuals feel safer and freer in expressing their opinions so that members can express opinions spontaneously [9]. Evaluation results based on Pre-Training Conditions are presented in Figure 3, and Post-Training Conditions in Figure 4.

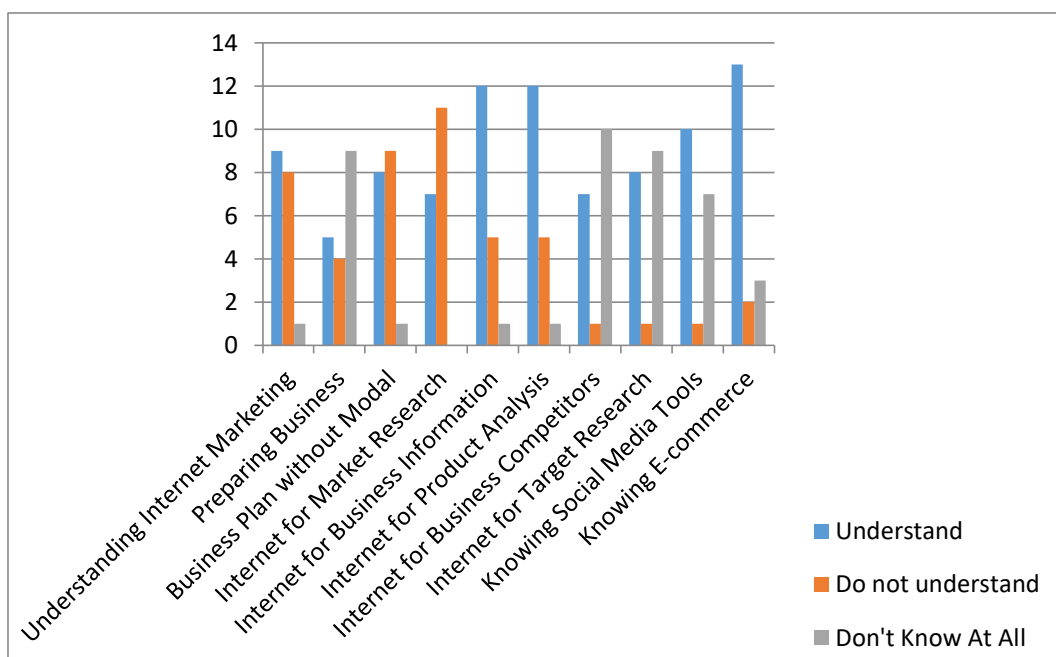


Fig. 3. Pre-Training Conditions

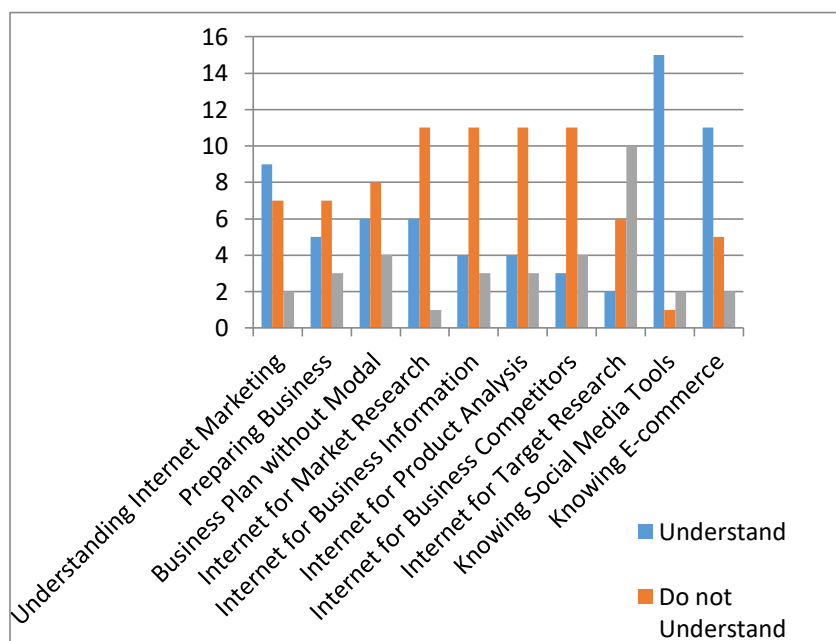


Fig. 4. Post-Training Conditions

Based on the comparison of conditions before and after training, the results are obtained as illustrated in the [Figure 5](#).

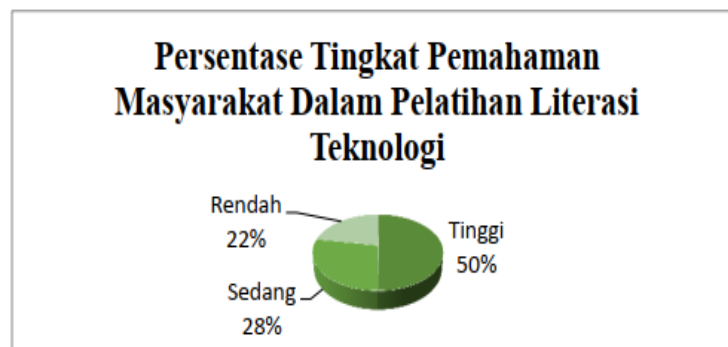


Fig. 5. Presentation of the Level of Literacy Understanding

The graph shows that 22% of total respondents showed almost no change in understanding information in the field of technology, 28% showed improved understanding of information technology, and 50% experienced significant changes in understanding information in the field of technology. This literacy level measurement was conducted using a technology literacy measurement questionnaire [10]. Literacy levels are classified as low if respondents do not experience changes in understanding information in the field of technology. Respondents are stated to have a moderate level of literacy if they show an improvement in information understanding in the field of technology but still have not applied these capabilities. Respondents are declared to have a high level of literacy if the respondent shows an improvement in the ability to prepare a business with or without capital, and after training, there is a high willingness to utilize technology as a medium of doing business. Literacy skills are also needed to answer the challenges of the industrial revolution 4.0 which disrupts various aspects of life. The new literacy not only includes literacy skills but also includes human literacy, data, and technology [11].

### 3.2.2. Online Implementation

Online implementation is done through the Whatsapp group, twice a week for one month. Learning techniques are conducted with discussions and practices. The team also helped participants who had made efforts to create ads using the Canva app and uploaded them to the village and personal social media accounts.

### 3.3. Evaluation

The evaluation was conducted at the end of the activity by giving a questionnaire to measure the literacy level of the participants. The team compared the results of the participants' answers at the beginning of the activity and the end of the activity to find out the level of understanding obtained by the participants. From the results of the activity, it can be known that follow-up is needed to improve the ability to understand the information in the field of technology by utilizing WhatsApp media for the empowerment of *karang taruna* in Cicadas village.

## 4. Conclusion

From the description above, it can be concluded that there is one respondent whose ability to understand information technology has not improved. Then, as many as seven respondents experienced an increase in understanding information technology, but there are still respondents who already know in advance, but still have not applied it in their daily lives. Six respondents experienced significant changes in understanding existing information technology, by showing that they become aware of what is meant by internet marketing, have a mature plan in preparing a business both with and without capital, or become aware of what is meant by e-commerce. In addition, from the data above, it was found that a respondent did not fill out the questionnaire either before or after the training activity. Then, one respondent did not fill out the questionnaire before the training began, and two respondents did not fill out the questionnaire after the training activity took place. This is questionable, why respondents do not fill out questionnaires both before and after the training activities take place.

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