Technology utilization in parereja villagers’ empowerment during covid 19 pandemic

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Abstract. Parereja village is located in Brebes Regency, Central Java. Brebes Regency is one of the regencies with a low human development index indicator. Regency condition describes the village unit condition in regency area. The main strategic issues in Brebes Regency Long-Term Regional Program Plan are education and health fields, the two of which cannot be separated. The target communities for technology utilization in villager’s empowerment were elementary school-aged children, POSPAUD mothers, and women. During Covid 19 pandemic, many things caused face-to-face activities impossible. Community empowerment programs were done by implementing healthy living pocketbooks for children, using social media as a reference for making educational props and early childhood development activities, and education and life skills training. Technology applications for making pocketbooks were using pinterest.com references and batik tutorial videos. Positive children's responses showed the successful use of pocket books. POSPAUD mothers' success was shown by children's creativity products, and the success of women's programs was shown by batik products. This activity was beneficial for the program's success and met technology literacy targets (technology literacy).

1. Introduction

The main strategic plan of RPJMD Brebes Regency is in education and health sectors. Problems in both fields can also be found in Parereja village as part of Brebes Regency. These problems are: (1) many early childhood education has not been served, (2) there are still many children graduating from Elementary – Junior High School who do not continue to the next education level, (3) many school-aged children do not go to school due to financial constraints, they must work to strengthen the family economy, (4) health services for elementary school students in Parereja village are still low. As a form of the university's role in community empowerment to participate in overcoming problems in the community, a collaborative team from Semarang State University and a Health College located in the regency offers programs that have been mutually agreed upon with the community. The activity programs are (1) distribution and use of pocketbooks of healthy living habits for elementary school children, (2) use of social media as a reference for making educational aids and early childhood development activities, for early childhood education POS cadres (POS PAUD), (3) life skills education for small and medium enterprises (UKM) village startups as a strengthening of the activities of Community Learning Center (PKBM) of Parereja village.
Covid 19 pandemic circumstance has become an emergency circumstance in Parereja village community. Community empowerment programs to overcome problems that exist in the community must still be carried out. In all life sectors facing Covid 19 pandemic, life is carried out by maintaining health protocols to prevent Covid 19 virus, such as wearing a mask, maintaining distance, washing hands with soap, and avoiding crowds. This is why community empowerment activities cannot be carried out directly. Routine life activities are still carried out by utilizing technology; interactions are carried out in networks (online). Even this community empowerment activity must be able to adapt to the circumstances and environment. It was said [1] that the practice of community empowerment during COVID 19 pandemic was a challenge and opportunity for Higher Education. What if the community empowerment program is carried out online? What is the effectiveness of the technology use that can be applied to empower the community in Parereja village?

As the target audience or respondents of this study are the community of Parereja village, where in each activity program the target is not the same. In this activity, the use of a pocket book on healthy living habits for children in elementary schools in Parereja village and their parents. Activities using social media as a reference for making manipulatives and early childhood development activities, the target audience is POS PAUD cadres. Life skills education activities for small and medium village enterprise startups as a strengthening of the activities of Parereja Community Learning Center (PKBM), the targets are PKK cadres (women's groups), along with youth organizations, chosen children's forums that have the opportunity to carry out activities in entrepreneurship.

Most adults have made use of cell phones or cellular technology. The main technology that can be used for long-distance communication is cell phones. In fact [2] stated that cellular technology has great potential to tackle a pandemic like Covid19, because it gives us access to big data in terms of volume, speed, truth and variety. However, some activities are deemed insufficient by using the WhatsApp application, only by sending short messages. Video recordings that replace skills demonstration activities will complement the presentation in place of the resource person's presence. Likewise, direct telephone calls also complement the use of technology in remote learning or empowerment. In other words, the use of technology is carried out while still paying attention to the use of multiple methods to match the needs of the target audience to achieve each activity program's targets. In implementing the activities program that has been decided to solve problems, these activities are carried out by utilizing possible technology to be implemented optimally and effectively. However, in choosing and deciding that type the technology will be used, it also considers the conditions of the target audience [3]. During Covid 19 pandemic, activities in the health sector could be carried out by disseminating health information and health education, disinfection of public facilities, providing handwashing facilities, including the provision of clean water. Related to the use of technology in community empowerment, technology can improve the performance of the empowerment implementing team [4].

Activities (1) distribution and utilization of healthy living habits for elementary school children are carried out by presenting teaching materials in the form of a pocket book with themes (4 themes), printed with pictures and in full color. The distribution is carried out door-to-door by the youth organization and Parereja village children's forum while still applying health protocols. Activities (2) the use of social media as a reference for making educational props and early childhood growth and development activities, for POS PAUD cadres, with the support of POSPAUD cadre group Whatsapp, introducing materials available in social media reference sources pinterest.com, practicing and implementing to early childhood with restrictions on the number of children, PAUD POS cadres, and using zoom meetings in conducting evaluation and feedback. It is said that social media is the best place to spread information [5]. Activities (3) life skills education is definitely not enough by using WhatsApp, video recording as a substitute for demonstrations, followed by long distance assistance, communication via WhatsApp or calling.

2. Methods
The implementation of community empowerment to overcome village problems with the 3 activity programs described in the introduction is carried out by applying Participatory Rural Appraisal (PRA) method, a method of community empowerment carried out by participatory community involvement. Participate in determining problem analysis, planning, implementing, and evaluating programs or activities. This method is generally applied to community empowerment programs, where community participation is involved in the entire program, not only as a target of activities. PRA is a method applied in action to increase community participation in development. The implementing team's role in PRA is as a facilitator, namely people who make it easier for the community to carry out these actions [6]. PRA method is very helpful in producing various village development plans [7]. More specifically, the community empowerment program in Parereja village as a community-based activity is carried out with varied methods, training, practice, and remote assistance by utilizing technology such as WhatsApp group (WAG), video, zoom meeting, face-to-face with the local university team (STIKES). Activities carried out collectively are carried out while still implementing the health protocol for Covid 19 prevention. Determining the media is carried out in stages. Because some activities take place continuously, coordination of preparation for activities is carried out with WA, sending messages or calling with village head and / or coordinating field activities that have been mutually agreed upon; the target audience coordinates with the health protocol according to the provisions; implementation of activities by delivering introductions, remarks, and / or material in the video. The practice is carried out after the target audience has studied the video material, communicated via message sending or direct calling when needed. Reflection and follow-up activities are carried out with a zoom meeting. To determine the achievement of objectives as an answer to problems in the application of technology, this program has been carried out by measuring the response to the target and the resulting product. The response is measured by filling out a questionnaire for elementary school-aged children and their parents and a google form for adults. The measurement results are presented in narrative quantitative descriptive.

3. Result and Discussion
Activities (1) distribution and utilization of healthy living habits pocket book for elementary school children, this pocket book was a teaching material for children who had to study at home due to Covid 19 pandemic. With pocket books in addition to healthy living habits, children also knew and understood various diseases and benefits of immunization. The material was not delivered through the application of technology, but the direct target was to use the results of technology in the form of a pocket book with pictures and printed in full color, interesting, presented in the form of 4 books with different themes. This was certainly adjusted to the condition of school-age children in Parereja who did not have their own cell phones. To support learning at home, the material in the pocket book was material related to School's Health Clinic (UKS). Books were presented with themes (immunization, nutritious food, prevention of infectious diseases, and personal hygiene) and in full color, so that children would be happy to read and easily understand, with a color copy photo, the teaching material or pocket book could reach many children. From 120 sets of pocket books that had been distributed to elementary school aged children, utilization at home was not only for children but also for parents. Percentage of children and parents were showing positive responses. The average score for the children's questionnaire was 87.54 and the average score for the parents was: 89.52 from a maximum score of 100.

The activity of using social media on the pinterest.com site had been implemented by PAUD cadres for early childhood. Together with the children, they practiced making creative works and doing activities. Coordination and assistance was carried out by the implementation team with the WAG. Through WhatsApp, information could be provided in a variety of ways, including in the form of images, videos and voice recordings. The advantage of providing interventions with WhatsApp was that it was easy to use, allowed frequent interaction between participants and material providers, and any doubts about a material could be immediately clarified during the intervention [5]. Meanwhile, reflection was done by zooming the meeting. The children's work could be seen in Figure 1.
Figure 1. Early Childhood with their Creative Works

POS PAUD cadres' response towards POS PAUD cadres' empowerment in implementing services for early childhood using WAG, pinteres.com, and zoom meetings showed a positive response with an average score of 91.43 from a maximum score of 100. Activities (3) life skills education, demonstration presentation of making batik practice was packaged in a video per stage. The target group had carried out the practice, and 23 batik had been produced, as in Figure 2. Skills with different products had been implemented and practiced in previous years, and in this implementation, apart from practicing making batik Sibori, it also produced previous skill training products. In addition to batik, it was also equipped with training and simple bookkeeping practices for small and medium enterprises. To prepare for the establishment of a small and medium-sized business pilot in Parereja, pilot management of small and medium enterprises had been carried out, with the division of tasks from the groups formed. This was one of the sustainability guarantees of the existence and operation from the small and medium enterprises in the village of Parereja. The activity targets were PKK mothers, as the research results [8] on the effectiveness of women's empowerment in social entrepreneurship and empowerment and knowledge sharing had a strong and significant impact on women's innovative behavior [9]. Small and medium enterprise start-ups, entrepreneurial groups of women were accompanied by several personnel from the Children's Forum and Youth Organization to strengthen their IT. It was explained in [10] that women had the opportunity to successfully use technology to build self-confidence and self-esteem which has wider implications in women's lives. Thus, it was hoped that there would be institutional strengthening of small and medium enterprises from several components of the village government, because there was mutual strengthening. The main objective of this group was to facilitate out-of-school children who did not have the opportunity to return to formal schooling through Community Learning Center (PKBM) of Parereja village. So this 3rd activity program had multiple benefits, strengthening village entrepreneurship, as well as facilitating children who did not have the opportunity to attend formal education due to economic factors and having to take non-formal education. Through this program, it was possible to have the opportunity to solve the educational and economic problems of Parereja community. This was also carried out in research [11] empowering youth who did not go to school or dropped out of school for various reasons by providing IT (information technology) supplies including the introduction of the internet and other knowledge and skills, to be able to live independently or be entrepreneurial through existing local potentials in the village. From this activity, the response of the small and medium business pilot group gave a positive response to the implementation of training and mentoring during the pandemic with video recordings, WAGs, and provision of guidebooks. The group's mean response score was 80.61 out of a maximum score of 100.
The community empowerment activity in Parereja village during the pandemic period by utilizing various technologies according to the target group could be said to be successful, supported by community participation, with the involvement of existing community components. The existence of a cooperative Youth Organization and Children's Forum in Parereja village also supported the success of this community empowerment program. The cooperative participation of the components or groups in Parereja village had been built in the previous year's program implementation, such as the implementation of SIPBM program in Parereja village [12]. This supported the statement [13] that social media and technology had the potential to have more benefits than disadvantages. Effective use of social media and technology can be manifested by paying attention to the selection, determination of types, and considering their use.

With the implementation of community empowerment activities during this pandemic, there had been technological literacy for Parereja community, especially the groups targeted by the program. However, this community empowerment program also faced obstacles, such as the technology used in program implementation that had never been used by the community before, except for WA for individual needs. The community was not yet fully independent, it still needed motivation or instruction from the leadership or the implementing team. The community still depended on the leadership role of both the community (the village head, chief of village PKK driving team, community leaders, as well as resource persons from universities). This was also reinforced by the results of research [14] which showed that task-oriented and relationship-oriented leadership behavior was needed in serving the performance of subordinates in a virtual environment during crisis situations. Strong and ready to play leadership was important in maintaining trust and building resources to protect communities during a pandemic [15]. So the success of the program was also largely determined by the commitment of the Village Head.
4. Conclusion
Based on the results and discussion above, it could be concluded, (1) the program of community empowerment activities in Parereja could be carried out well online by utilizing multi-method technology applications according to the conditions or needs of the target audience or Parereja community. The use of technology in the community empowerment in Parereja village was effective, shown in the activities (a) Distribution of a Healthy Living Habits Pocket Book received a positive response from the target child, as well as the parents at home. (b) The use of social media as a source of ways to make educational props and activities for early childhood growth and development increased the competence of PAUD POS cadres in utilizing technology other than sending messages, making PAUD POS cadres independent and early childhood activities of higher quality. (c) The use of distance learning media was not monotonous. As a suggestion, community motivation by superiors was strongly needed.

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