

Community Based Communication Model: Development of information and communication technology in the village

Dedeh Fardiah, Ferry Darmawan, Rini Rinawati

Faculty of Communication

Universitas Islam Bandung

Bandung, Indonesia

dedeh@unisba.ac.id, ferry@unisba.ac.id, rini.rinawati@unisba.ac.id

Abstract—The presence of telecommunications and informatics infrastructure through the "Desa Pinter" program (Village has Internet) has the potential to accelerate the occurrence of social, economic and cultural changes in the community, especially in the villages. But in reality, people in the village are still reluctant to use information and communication technology (ICT) to access community services available at village government offices. In this context, it has been found that the community-based communication model (CBC) is used to develop ICT in the village so that the available infrastructure can be utilized optimally. This study aims to determine the effectiveness of the CBC model in developing ICT in the village. Using a case study, this study selected 18 districts in West Java that had village internet. The results show that the CBC model can invite villagers to use ICT, especially for welfare improvement. However, there are still obstacles in the procurement and maintenance of ICTs, both in terms of budget and human resources. The village government is expected to overcome these obstacles.

Keywords—community based communication; information and communication technology; village has internet; desa pinter

I. INTRODUCTION

The digital divide is a phenomenon that appears after the development of internet technology. This digital gap can be seen from various perspectives, such as those who are rich with the poor, urban residents and villages, which impact on the level of education that will be different. Indonesia, including a country that has a digital divide, is quite significant. As Tempo.co reports that there are still many individuals who are not connected to the internet because of the uneven infrastructure or low income, they cannot adopt mobile internet. Indonesia with more than 130 million people accessing the internet has not shown an optimal number compared to the population. The digital divide is still happening [1].

The desire to create a modern society that is not left behind in the era of globalization encourages the government to strive to improve the quality of life of its citizens through information and communication technology (ICT) development programs to remote villages. The aim is to provide easy and inexpensive internet access so as to provide benefits, especially to improve the standard of living of rural communities.

Efforts made by the Indonesian government to accelerate telecommunications services by launching the Universal Service Obligation (USO) program as a form of ICT development in remote areas. In 2010 the government built an internet network infrastructure that could reach out to remote corners of Indonesia. USO was realized by the Indonesian government in the form of the concept of "Ring Village" (village accessed by telecommunications), "Desa Pinter" (Village has Internet), and internet facilities in the form of District Internet Service Centers (PLIK) and Mobile District Internet Service Centers (M -PLIK). These programs are a manifestation of the ICT vision in gradually creating an information-based Indonesian society until the year 2025 which aims to provide easy and inexpensive internet access to rural communities [2].

In 2014, a study of the PLIK program in the province of West Java showed that the reality in the field of using the internet with PLIK for rural communities at the sub-district level turned out to encounter various obstacles [3]. Research in 2015, based on the findings of previous years' research on data on information dissemination processes that had been carried out on the PLIK program carried out in West Java, illustrated two different communication models namely the PLIK manager's communication model which was less effective and the PLIK manager's communication model was successful so produce a different strategy model. Researchers conducted research on the level of accessibility of internet users in successful PLIK program areas [3].

Based on the phenomena and results of previous research, in 2017 the researchers continued their research on the implementation of the community-based communication model to the Desa Pinter program launched by the government through the Ministry of Communication and Information, in an effort to serve and advance all regions of Indonesia which had been difficult to obtain telecommunications services and also as an effort to empower the economy and agriculture of the community by providing access to information on the BTIP (Telecommunications and Rural Information Office) website [3].

Based on the above phenomenon, the researcher conducted a follow-up study entitled "How is the effectiveness of the community-based communication model in developing ICT in the village?"

II. METHODS

The research method uses case studies, by conducting in-depth interviews, surveys, observations and Focus Group Discussion (FGD) [4]. This research study is qualitative in nature which aims to gain an authentic understanding of people's experiences, as perceived by those concerned. The researcher as a research instrument will carry out several techniques in collecting data needed for analysis. The data collection techniques in this study are as follows:

1) *Observation*: The researcher conducts field research by directly visiting and observing objects research that can provide information about the problem being studied, enables do self-observation, making notes, and observes ongoing activities in a non-participant manner.

2) *Interview*: The researcher conducted a combination of two interview techniques, namely in-depth interviews by exploring information in depth by being directly involved with the life of the informant and asking questions freely without guidance on questions prepared in advance so that the atmosphere was alive, and repeated. Then, guided interview technique where the researcher asks the informant about the things that have been prepared beforehand. Interviews were conducted with parties that were relevant to the research, especially the managers of Desa Pinter who were in the research area.

3) *Documentation*: One technique for tracing secondary data, such as documents that are relevant to the Pinter Village program.

4) *Focus Group Discussion (FGD)*: The discussion was focused on discussing research material, in an informal and relaxed atmosphere, but can be measured. This technique is used to reveal the meaning of a group based on the results of discussions focused on a research problem [5].

Furthermore, the steps of data collection carried out in this study refer to the stages proposed by Nasution, namely the orientation, exploration, and member check stages [6].

The object of the research was the manager of Desa Pinter in 6 from 18 regencies in West Java Province. The target districts with assumptions in line with the targets of Desa Pinter are relatively difficult rural areas to reach from urban areas.

III. RESULTS

The use of internet facilities in villages has limitations compared to internet usage in the city. The obstacle faced is still a lack of telecommunications infrastructure in the village. This factor underlies why the government makes programs about internet access in the village to get this internet facility. The main objective is the connection of each village to the internet, so each village has access to the latest information and knowledge. One of the things expected is that remote communities can use the internet to promote natural products to consumers from outside the village. It can also be used to introduce the potential of villages and traditional tourist attractions to the world community. Therefore, the existence of the internet will be able to improve people's lives.

The "Desa Pinter" program from the government also aims to minimize technological gaps between villages and cities. The use of the internet is now not only enjoyed by urban communities, which in terms of technological development can be said to be more advanced than rural communities. At present, internet use in rural communities has begun to stretch. Can be seen from the availability of internet cafes in villages that can be used by the community to obtain internet networks. Therefore, the indicator of the success of internet programs in the village is not solely from the aspect of availability and affordability. The success of the internet program in the village will also be determined by the available facilities maximally utilized by the village community. The internet program in the village becomes meaningless if the available facilities are not utilized. Therefore, ideally there should be a strategy so that telecommunications and informatics infrastructure in the countryside can be utilized optimally.

IV. DISCUSSION

A. *The Role of the Government in a Community-Based Communication Model*

New communication tools emerging with the development of internet technologies are called "digital communication tools". When we talk about digital communication tools, what comes to mind are Facebook, Twitter, Instagram and similar social networks that are used online and virtual platforms like websites, microblogs and search engines. With the advent of new communication tools, already available communication tools are now becoming to be called "traditional communication tools". Traditional communication tools are printed (journals, newspapers etc.), visual (television, cinema etc.) and audio (radio) communication tools [7].

Now, access to technology and the internet in Indonesia is still uneven. Residents in big cities may already be able to enjoy the fast internet and various other latest technologies, but not with people living in rural or remote places. Various efforts were made in overcoming technological obstacles. In this case, the government has an important role to play in ensuring that technology is accessible to everyone in Indonesia.

Government efforts through the Universal Service Obligation (USO) Program in the form of the Desa Pinter Program will succeed if there is support from the regional government. The aim of the USO Program is to establish connectivity where basic telecommunications infrastructure must be built in advance so that at least people can make calls and send messages. Furthermore, if the basic infrastructure has been built further provides internet connection, utilization, empowerment, and improving the quality of public services. In supporting these development goals, synergy is needed. To realize this synergy, the role of the Regional Government is needed. In this sub-chapter, we will describe how the role of the regional government in supporting smart village programs starting from the district, sub-district and village governments. The results of the research in six research areas indicate that at the district government level the maximum contribution is in accordance with government programs (figure 1).

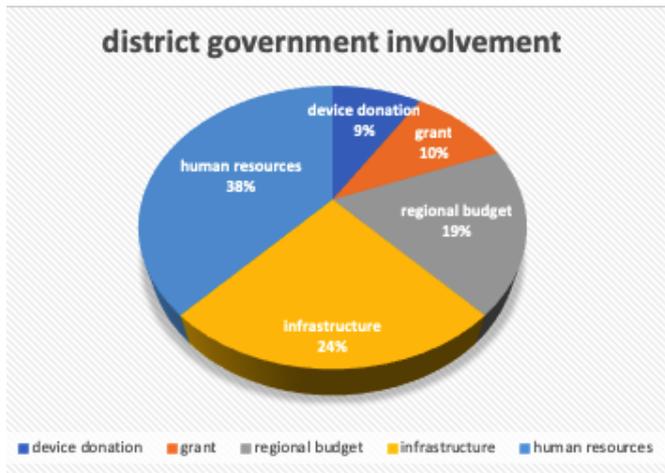


Fig. 1. District government involvement chart.

The district government is quite good at contributing to various aspects both in terms of HR and equipment and budgeting in developing Desa Pinter in its area. Why does the district government give full support to this program? Because development today cannot be separated from the development of information technology and communication. Starting from the simplest, such as the use of cell phones to the use of the internet with various features and features, it has penetrated all lines of people's lives.

Not only in urban areas, but also in rural areas, the development of information technology has been penetrated so that what can be addressed from these conditions, especially in terms of efforts to accelerate the development of rural areas and isolated areas is to do many things that can be done with various technological conveniences and commitment of existing institutional leaders.

In addition to the role of the district government, it turned out that the sub-district also had a role in the development of Desa Pinter (figure 2).

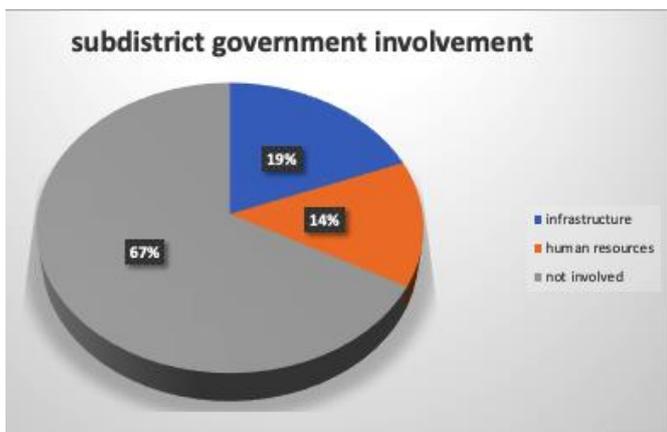


Fig. 2. Subdistrict government involvement chart.

In addition to the sub-district parties, the role of the village is one of the supporting factors for the success of the internet program. The Desa Pinter program will be successful if it involves many parties to participate in program activities. In

order to realize Desa Pinter, it is necessary to involve the village in realizing and succeeding this internet program. One of the research studies identified the role of the village and the form of support given to the Desa Pinter program as shown in figure 3.

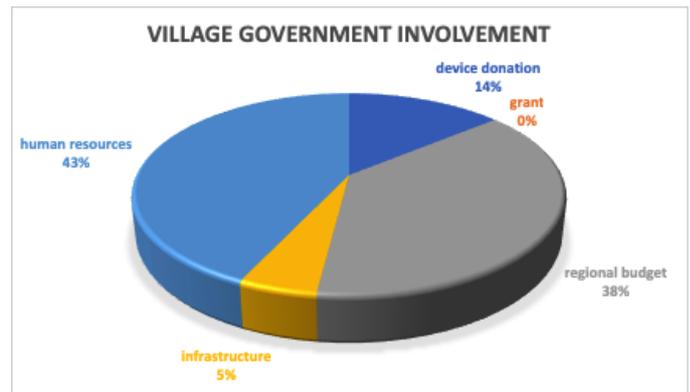


Fig. 3. Village government involvement chart.

Based on research data shows that the involvement of the village in supporting the Desa Pinter program indicated that in general (43%) the village was involved in human resources and even budgeted funds in the village's regular regional budget (38%). This indicates that the village has a concern in developing the internet in the village. The internet for rural communities is indeed still considered to be an expensive item. In order to be able to access the internet, they have to struggle to find a way and pay a high price. Even though on the other hand the internet is a need that benefits the same for anyone. The internet has a function that is more or less the same as a book as an information window. Even the power of audio-visual owned by the internet has a bigger and stronger impact on the development of people's knowledge.

Luckily in the village in the research area, the village agency cared for its citizens to be able to enjoy internet services without having to pay expensive fees. They no longer have to go all the way to the city to just visit an internet cafe whose numbers are very limited. Not infrequently they have to queue before entering the internet cafe because the number of visitors is not comparable to the number of computers available.

But things that need to be highlighted by the presence of the internet in the village, of course, must be accompanied by strong regulatory support from the government because the educational background of each citizen in the village is very diverse so it greatly influences them in using and addressing the impact of the internet in their daily lives. Although some villagers are already familiar with the internet, most of them still need socialization so as not to be passive in utilizing the information and communication technology infrastructure that already exists in the Desa Pinter program. So it is very important for the village government to provide human resources who can manage active internet services and are able to provide convenient services for every visitor who comes.

The limitations of human resources who are experts in the field of ICT, are not the least cause of the lack of optimal use

of the internet in the village. The lack of reliable technicians in handling ICT infrastructure has caused existing devices to be idle longer than utilized. Even in some village offices, staff cannot do much when experiencing problems in operating existing equipment.

This condition requires the village government to prepare a village budget, specifically maintenance of computer equipment and related electronic equipment, as well as the provision of technicians who are ready to backup if at any time there is damage. Because, no matter how sophisticated the infrastructure is available, if it is not supported by the commitment of the local village government, it will provide less benefits to the community.

B. Community Participation in the Community Based Communication Model

The rapid development of technology in rural areas has made people begin to change the traditional way of resorting to modern methods, this also has an effect on the economic income of rural communities which used traditional methods of work that take a long time and change in modern ways that make it easier for people to do more fast and efficient.

With the rapid development of information technology, many people from various walks of life, including rural areas, have utilized their functions. In fact, not a few people become dependent on technology that makes all information available. At present all levels of society are good in the community, ranging from children to adults. The presence of Desa Pinter which is the research area shows a diverse response, some are concerned and many are not. Therefore, in these villages, there is a community that was formed to socialize the services available so that village communities can get to know ICT. In general, the use of ICT is still only accessing light information, such as entertainment or local news. Nevertheless, several villages have used it to introduce products or services to the outside world, even though they have not been maximized. However, this indicates that community participation has begun to grow by utilizing the internet presence in his village. For those who are very responsive, they have a very significant impact, as evidenced by the enthusiasm of all levels of society towards the existence of the internet for both children and rural communities towards the presence of Pinter Village in their area. This is certainly influenced by factors such as curiosity about technological developments and awareness of technological developments. The management and involvement of the community in managing smart villages are only done by a number of people and certain people.

C. Direct Communication Strategies in Community-Based Communication Models

An important factor in the implementation of the Desa Pinter program is that what is done is relevant to the needs and conditions of the community. In practice, the Desa Pinter program is communicated through socialization from the government to the community, even though the socialization is considered to be not optimal. However, the government always strives to disseminate information about Desa Pinter through various direct communications from the government to the

community so that the majority of the village community can find out the existence and benefits of smart villages. There are several communication efforts carried out by the managers of Desa Pinter with the district, sub-district and village governments.

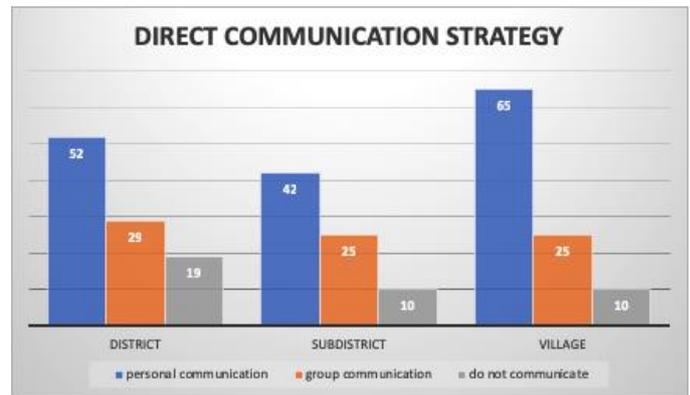


Fig. 4. Direct communication strategy.

In figure 4, based on research findings illustrate that there are three factors that occur in direct communication between the internet manager and the district, sub-district and village governments. Broadly speaking, almost all levels of direct communication through interpersonal communication dominate very much, both at the district level 52%, at the sub-district level 42%, also at the village level 65%, this means that interpersonal communication has a role in communication carried out by manager’s internet so that the program runs smoothly.

Understanding of the development process in the field of internet every party involved in it requires communication, then communication becomes important and influences the success of communication, so that the relationship of social contraction in the relationship between interpersonal communication in a normal community group usually requires reciprocal exchange where the sender and receivers who know each other in a high and dynamic level of interdependence.

In maintaining the stability of effective interpersonal communication in rural communities, the local government and the existing young generation, and traditional leaders must prepare mature concepts so that they are not targeted by the community. The openness of people to interact with each other must be preserved so that communication continues without stopping. Thus, interpersonal communication in the community has an important role in maintaining community solidarity, because the establishment of effective interpersonal communication will create positive value for the creation of an information literate society. With interpersonal communication, there is a very meaningful closeness between Desa Pinter managers and related parties so that the program runs smoothly.

In addition to communication between personal communication used is group communication, in this case, the important group communication function. The existence of a group in the community is reflected in the functions that will be carried out. These functions include the functions of social

relations, education, persuasion, problem solving and decision making, and therapeutic functions. All functions are used for the benefit of the community, groups, and members of the group itself as well as in Desa Pinter programs.

D. Communication Strategy Media in a Community-Based Communication Model

Humans are actually social beings. As social beings, humans need interaction with each other. In historical records, the most primitive way of interacting with humans is to communicate face-to-face, which requires humans to use their physical directly to communicate or interact. However, along with the development of technology followed by various inventions, face-to-face communication has experienced a very significant development. With today's technological sophistication, he is able to change the order of interpersonal communication which initially from face-to-face interpersonal communication is now media interpersonal communication. Media communication is a communication where the process of delivering and receiving messages uses various media such as e-mail, telephone, and social media.

Geographically, Indonesia's communication system is divided into two major parts, namely rural and urban communication systems. Each region has a fundamental characteristic. Communication systems in rural areas are stronger in carrying out interpersonal communication. While the communication system in urban areas is more entrusted to the mass media [8].

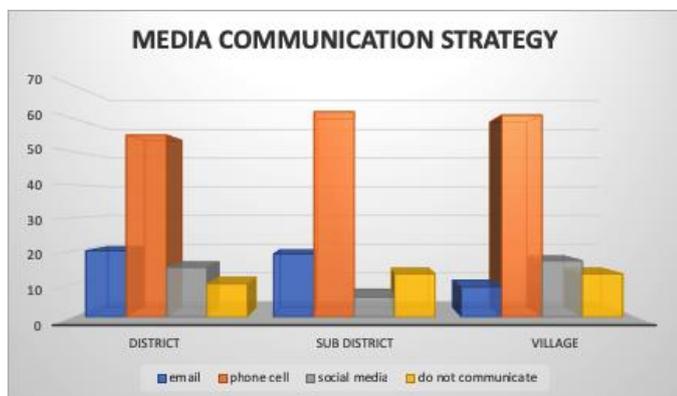


Fig. 5. Media communication strategy.

Figure 5 shows that telephone communication is a widely used way for media communication between internet managers and various parties, up to 50%, both at the district, sub-district and even village levels. The telephone as a means of communication in everyday life has a very important role. Through the telephone, we can communicate remotely quickly and easily. In addition, the telephone is also the main means of business support to date. Many people choose telephones as a communication tool in addition to being fast and easy but because of the relatively low cost, energy saving, practical, time efficient, and energy. In the local, national and international spheres, telephones are a very practical means of communication in lieu of face to face.

Besides telephone, e-mail has replaced traditional correspondence. Its presence brings practicality in communicating quickly and efficiently. Communication activities involving documents have been different. Before there was communication technology, people carried out communication activities by going to the Post Office to send letters or other documents, and the costs were sometimes not cheap. Now, all that can be done via e-mail, and all documents can be in digital format. The reach of the audience is very broad and fast at low cost. The development of communication technology affects many areas of human life that aim for work efficiency and effectiveness. Using e-mail allows us to send messages in the form of letters to the whole world in a very fast and low cost.

The presence of the internet as a communication medium has given birth to new media, ways to communicate, and more modern socialization. One of the new media products that is now an integral part of our lives is social media. Social media provides a huge opportunity for users to stay in touch with old friends, colleagues, and partners. Social media also helps people around the world to make new friendships, share content or content like pictures and many things. In addition, social media also changes the lifestyle of a community, including rural communities. There are many roles of social media for our lives, not only in the field of education, social media also plays an important role in the field of business.

The use of social media is two sides of a knife, on the one hand, it can have a positive impact such as expanding the network of friends, as a means to develop skills and social, as a medium for disseminating information and many others. Whereas on the other hand, it can have a negative impact such as having difficulty socializing with the surrounding environment. Social media will make people more selfish. The impact of it's just like developing crimes in cyberspace such as spreading hoaxes or trafficking in human beings. The most important benefit of social media is as a medium of communication. In government, both the central and regional governments rarely interact between office holders and their people.

However, with the presence of social media, the public can interact directly with officials through the twitter account, Facebook, Instagram owned by these officials. This interaction can be carried out by the community and village officials unlimited by the time and place. By utilizing social media, villages can provide information quickly to the community. In addition to getting information, the village community can provide information about the village so that it actively involves the community and village government in order to accelerate development and open public information. In addition, social media is also a means of publication about village profiles, potential areas, announcements, programs, and photos of village activities that can be accessed not only by local residents but also throughout the world.

V. CONCLUSION

The effectiveness of the CBC model found various results in several Desa Pinter. The village that has good management resources, is able to utilize smart village programs to improve

the welfare of rural communities, such as opening an online store to market their village products. However, most still use the village internet for ordinary use such as entertainment or information. However, based on the FGD conducted, the role of the community is highly expected to remain a pioneer for the driving force of village internet use to improve the welfare of rural communities towards the era of globalization. While the village government is expected to be able to overcome the obstacles that arise such as limited human resources and device maintenance budget.

ACKNOWLEDGMENT

Thanks to DP2M Kemenristekdikti for funding this research, also for LPPM Unisba which has facilitated the research process to completion.

REFERENCES

- [1] Tempo, Infrastruktur Merata Digital Divide Menipis - Nasional Tempo.co. 2017. [Online]. Retrieved from: <https://www.tempo.co/>.
- [2] D. Kurnia, Pemerintah akan Bangun Internet dan Aplikasi di Desa Terpilih, [Online]. Retrieved from: kominfo.go.id <https://kominfo.go.id/index.php/content/detail/595>.
- [3] D. Fardiah, R. Rinawati, and O. Kurniadi, "Optimalisasi Pusat Layanan Internet Kecamatan Dalam Meningkatkan Aksesibilitas Masyarakat Terhadap Informasi," *MIMBAR* vol. 30, pp. 243–252, 2014.
- [4] E.I.K. Putri, A.H. Dharmawan, R. Amalia, and N.K. Pandjaitan, "Perkebunan Kelapa Sawit," *Sodality J Sociol Pedesaan*, vol. 6, pp. 105–111, 2018.
- [5] A. Al Mamun and K.A. Rahman, "Nonformal Education in Improving Quality of Life of Underprivileged Children," *Journal of Education and Learning (EduLearn)*, vol. 7, no. 1, pp. 11–20, 2013.
- [6] S. Nasution, *Metode penelitian naturalistik kualitatif*. Bandung: Tarsito, 2003.
- [7] F. Cizmeci, "The effect of dijital marketing communication tools to create brand awareness by housing companies," *MEGARON / Yıldız Tech Univ Fac Archit E-Journal*, vol. 10, pp. 149–161, 2015.
- [8] D. Ganju, I. Bhatnagar, A. Hazra, S. Jain, and M. Khan, "Reach of media and interpersonal communication in rural Uttar Pradesh," *The Journal of Family Welfare*, vol. 56, pp. 83–91, 2010.
- <https://nasional.tempo.co/read/1031477/infrastruktur-merata-digital-divide-menipis>. Accessed 5 Dec 2018.