

Management of Hutumuri Village Infographics by Using Statistical Data

SANLLY JOANNE LATUPEIRISSA, ROSALINA SALHUTERU, HENRY J. WATTIMANELA, FERRY KONDO LEMBang, RONALD J. DJAMI, MUHAMMAD Y. MATDOAN, NOVITA S LAAMENA, YUDISTIRA

Statistics Study Program, Pattimura University, Indonesia

Email: joannelatupeirissa22@gmail.com

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ABSTRACT

The problem of Hutumuri village officials is that they are limited in presenting data visually so that the available data is difficult to understand by the community. Therefore, the team decided to provide training to Hutumuri village officials in managing and utilizing population statistics data to create effective and attractive infographics. Village officials were trained to understand the basics of statistics, how to interpret data, and techniques for creating infographics using MS Excel. The training also covered data visualization concepts, such as the selection of colors, typography, and icons to make infographics attractive. Infographics are used to publish population statistics in Hutumuri Village, and village officials can easily present data in visual form at meetings or community gatherings. By this community service activity, village officials better understand the concept of population statistics data, can calculate and present population statistics in Hutumuri Village.

Keywords: *Infographics, Population Statistics, Village Officials.*

1. INTRODUCTION

Villages play a strategic role as the foundation of national development, as they are where various development programs are directly implemented and experienced by the community. **(Hafni et al., 2021; Prasetyani et al., 2023)**. Villages also play a strategic role as a primary source of information that reflects the actual conditions of the community. Data generated at the village level often serves as a key reference for regional and national development planning **(Nugraha et al., 2015)**. To achieve sustainable and inclusive development, data plays a crucial role as the basis for informed decision-making. Hutumuri Village, located in the South Leitimur Sub-district of Ambon City, has the potential and opportunity to develop its agriculture, fisheries, and tourism sectors as key economic drivers. However, challenges remain in managing village information. Village officials often face limitations in presenting data visually, making it difficult for the general public to understand. Additionally, community access to relevant and engaging information is still limited, resulting in low participation in development programs. This highlights the need for concrete efforts to overcome barriers in data management and dissemination.

Infographics can present data in an interesting, creative, and informative way. **(Cahyani & Indrayani, 2024)**. Infographics are visual representations of data, information, or concepts designed to help the audience better understand the material presented. **(Deviona et al., 2021)**. In the context of village development, infographics can include not only various elements of population statistics—such as population size, age structure, types of employment, and commodity yields—but also information about village infrastructure **(Johanes et al., 2024)**. By combining visual elements such as graphs, diagrams, icons, and concise text, infographics can convey messages more effectively and attractively than traditional text or tabular data presentations **(Deviona et al., 2021; Puspitasari & Hemelia, 2024)**. Infographics help enhance public understanding of complex data and information quickly and accurately **(Ozdamli et al., 2016; Utami & Kholijah, 2023)**.

Given these extensive benefits, the use of infographics is a suitable solution to the data management challenges in Hutumuri Village. Therefore, the significance of this community service activity lies in empowering village officials to manage statistical data and present it effectively through infographics. The training on creating infographics is a first step toward building technology-based village governance and promoting transparency. Similar activities have been conducted in the past. **(Marzeta & Muhammad, 2023; Nur et al., 2023; Sunandi et al., 2021)**. By managing and conveying information visually, Hutumuri Village can increase community involvement and develop a more modern, responsive, and sustainable management system.

2. METHOD

This community service activity is carried out through several stages designed systematically to achieve the goal of empowering village officials in managing and presenting data through infographics. The methods used include preparation, training implementation, discussions, and evaluation of results as follows:

2.1. Preparation Stage

The community service team, namely the Statistics Division of the Statistics Study Program, FMIPA Pattimura University, conducted initial observations and discussions with Hutumuri Village officials to understand the needs related to data management and information presentation and conveyed activity plans, including technical and objectives of the activity. Furthermore, the team designed training materials that included an introduction to population statistics, the benefits of population statistics, statistical data management with Ms. Excel and making infographics. The materials were made using examples of statistical data that are relevant and easy to understand.

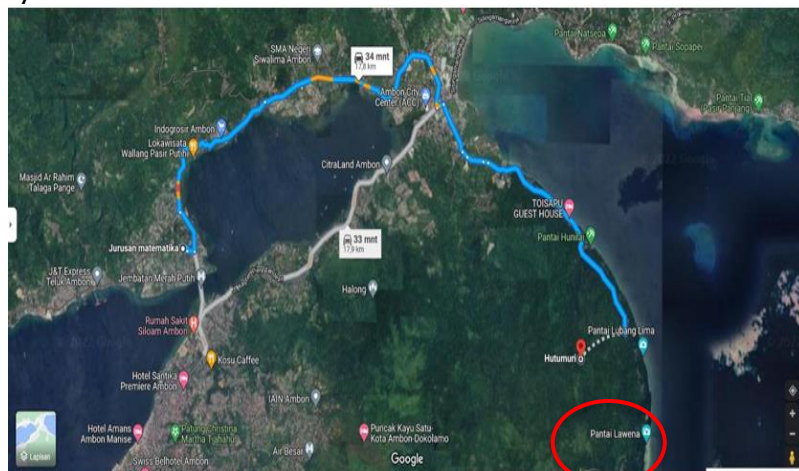


Figure 1. Location Map (Source: Google Maps, 2022)

Figure 1 is a map of the activity location showing the position of Hutumuri Village on the local area map. This map provides a clear picture of the location of the activities as well as the accessibility that supports the implementation of this program.

2.2. Training Stage

The initial session began with a theoretical presentation on the introduction of population statistics, population data sources, population components, population growth and age composition (figure 2). Furthermore, in the second session, participants were trained to process sample population data using Ms. Excel (**Athoillah et al., 2020; Puspitasari & Sitohang, 2023**) and then compile infographics that contain visual elements such as graphs, icons, and text.



Figure 2. Material Presentation (Source: Private Documentation, 2022)

2.3. Discussions and Q&A Stage

Provide an interactive discussion space to discuss the challenges faced by participants in the infographic creation process. This community service activity adopts a community-based participatory research (CBPR) approach, which emphasizes active involvement of local community members—in this case, the village officials—throughout the stages of problem identification, program implementation, and evaluation. This participatory method ensures that the training responds directly to real community needs and enhances the relevance and sustainability of the program. In addition, elements of service-learning were incorporated through the involvement of university students in facilitating and learning from the community engagement process.

2.4. Evaluation Stage

Evaluation is carried out through direct observation and assessment of practical results. In addition, documentation of activities was also carried out. To evaluate the effectiveness of the training, participants were also given a short questionnaire and informal interviews were conducted. The questions were designed to assess participants' understanding before and after the training, as well as their perception of the usefulness and relevance of the training materials. Results from the evaluation showed an average increase of 40% in participants' comprehension and practical ability.

3. RESULT AND DISCUSSION

The implementation of the infographic management training in Hutumuri Village showed positive results. The following are the main achievements of this activity:

3.1.Attendance and Participation of Participants

The training was attended by village officials and a group of Pattimura University students who were implementing the Community Service Program (KKN), with an attendance rate of 90% of the number of invitations delivered as shown in figure 2. During the practical sessions, participants showed high enthusiasm, processing sample population data using Ms. Excel.

3.2.Improvement of Participants' Understanding

Based on the evaluation through direct observation and assessment of practical results, there was an estimated 40% increase in the average comprehension score, from 50 to 70 on a scale of 0–100 (Figure 3). This score was derived from the facilitators' assessments of participants' understanding and skills during practical exercises and discussions. The assessment showed that participants were able to apply basic concepts of infographics and demonstrated improved ability in identifying key elements such as appropriate chart types, color use, and layout structure.



Figure 3. Improvement in Participants' Average Comprehension Score
(Source: Ms. Excel , 2022)

3.3.Infographic Creation Practice

Participants were able to create simple infographics using examples of population data such as population distribution by age group, education level, and occupation. The creation process starts with processing raw data using Ms. Excel. Participants are trained to process data into structured tables, then use Excel features to create appropriate graphs and charts, such as bar charts, pie charts, and histograms. Participants were then taught to integrate visual elements, such as icons, colors, and layout, to strengthen the visual appeal and key messages of the infographic as shown in figure 4.



Figure 4. Sample Infographic (Source: Ms. Excel, 2022)

3.4. Participant Feedback

Participants stated that the training was relevant and could help them present village data more effectively in the future. The results of the questionnaire and informal interviews revealed that over 80% of participants felt more confident in presenting data after the training (figure 5). Most participants acknowledged the usefulness of the materials and expressed interest in applying infographic techniques in future village reporting. However, some participants indicated that they needed more time and technical assistance in using Excel and other digital tools effectively.

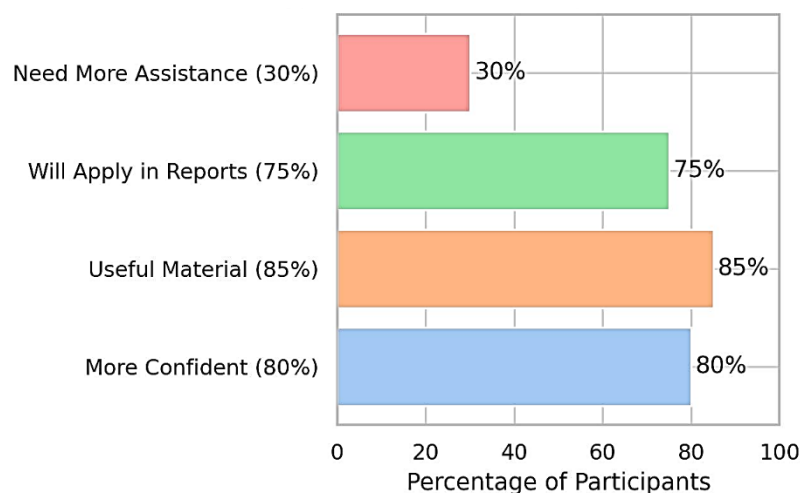


Figure 5. Sample Infographic (Source: Ms. Excel, 2022)

The use of sample data in this training is based on several technical and ethical considerations, particularly in relation to limited access to original village data. One of the main reasons was to maintain the privacy and confidentiality of sensitive information contained in the original

demographic data of Hutumuri Village, such as names, addresses and other personal information. Using simulated data allowed the training to continue without the risk of privacy violations. In addition, technical constraints in obtaining and processing the original data were also a supporting factor. Original village data requires a time-consuming process of collection, verification and processing and requires coordination with various parties. By using pre-prepared data examples, the training could focus more on developing participants' technical skills in processing data and creating infographics. Figure 6 shows documentation of the activity.



Figure 6. Team With Village Officials (Source: Private Documentation, 2022)

Although based on sample data, the training still provided significant benefits, as participants were taught principles of data management and presentation that can be applied to real data in the future. It also allowed participants to practice their skills without worrying about making mistakes on sensitive data. The following are discussion points related to the results of the activity:

a) Effectiveness of Training Methods

Using statistical data examples as simulation materials proved to be effective in introducing the concept of infographics to participants. Despite the simulated data, participants can understand how data is processed and presented.

b) Participant Challenges

Some participants experienced technical difficulties in using Ms. Excel, especially those who had not previously used technological devices such as laptops. The limited training time was an obstacle for participants to explore the application features in depth. These difficulties highlight the need for follow-up training programs with more intensive mentoring, forming the foundation for the sustainability of this community service initiative.

c) Potential for Future Implementation

Although only using simulated data, participants demonstrated a new awareness of the importance of visual data presentation. This suggests a great opportunity to apply these skills in the management of original village data. This training can be the first step towards creating transparent village data governance that is easily understood by the community, especially to increase participation in village development planning and evaluation.

d) Development Recommendations

Improving technological facilities in the village, such as computers and internet connections, will support the sustainability of village officials' ability to present infographic-based data. Therefore, this training not only provides technical skills, but also opens new insights for village officials on the importance of transparent and communicative data management.

These findings not only indicate the effectiveness of the training but also uncover areas that require further support. The use of simulated data succeeded in introducing visual data presentation skills, while the observed limitations in technology usage reveal the importance of continuous capacity-building. Therefore, future programs should prioritize more hands-on training sessions supported by appropriate infrastructure to sustain and scale the benefits of this initiative.

4. CONCLUSIONS

Based on the results of the management of Hutumuri Village infographics by using statistical data, it can be concluded that this activity has a positive impact on improving the ability of village officials to present data visually. This training not only provides a basic understanding of the concept of infographics, but also technical skills in processing data using Ms Excel and presenting it through simple infographics. The impact of this training shows great potential for developing more transparent and communicative data governance in Hutumuri Village in the future. In particular, the solution offered through this training effectively addresses the core problem faced by the village officials, namely the limited ability to present data in a visual format. By enhancing their skills in data visualization, the training helps ensure that important information becomes more accessible and easier for the community to understand. This directly supports better public engagement and fosters a culture of openness in village administration.

The evaluation results showed a 40% improvement in participants' comprehension based on practical assessments, and over 80% of participants expressed confidence and readiness to apply the knowledge in real contexts. These findings confirm the success of the program both technically and perceptually. Furthermore, the challenges faced by some participants in using digital tools highlight the need for continued training and mentoring. These insights provide a strong foundation for designing sustainable follow-up programs that enhance community capacity and improve the overall effectiveness of data communication in village governance.

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