

Statistical Infographic Publication: Embracing the General Public

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Abstract

In the current era of the Covid-19 pandemic, statistical data is an important compass for the public to see the direction of socio-economic changes that are occurring. But statistics are still considered something complicated by common people. This creates a huge wall for the public to use statistical data as a guide. As a result, a post-truth society develops easily in a society that causes a variety of information chaos. Local Statistical Office Pulang Pisau Regency, Central Kalimantan Province, Indonesia, made an innovation in publishing statistical information to the public, namely the creation of book publications containing statistical information made in infographics. Each page of the statistical discussion is designed with interesting infographics and easy to understand even for ordinary readers. Infographic publication can be downloaded via the website and promoted through social media. This infographic publication is expected to reach more ordinary people in increasing public awareness of statistics. This article proposes how to build statistical literacy and awareness to common people using an infographic publication.

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STATISTICAL INFOGRAPHIC PUBLICATION: Embracing the General Public

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Abstract: In the current era of the Covid-19 pandemic, statistical data is an important compass for the public to see the direction of socio-economic changes that are occurring. But statistics are still considered something complicated by common people. This creates a huge wall for the public to use statistical data as a guide. As a result, a post-truth society develops easily in a society that causes a variety of information chaos. Local Statistical Office Pulang Pisau Regency, Central Kalimantan Province, Indonesia, made an innovation in publishing statistical information to the public, namely the creation of book publications containing statistical information made in infographics. Each page of the statistical discussion is designed with interesting infographics and easy to understand even for ordinary readers. Infographic publication can be downloaded via the website and promoted through social media. This infographic publication is expected to reach more ordinary people in increasing public awareness of statistics. This article proposes how to build statistical literacy and awareness to common people using an infographic publication.

Keywords: Infographic, Literacy, Dissemination, Communication

topics: S2 broadening audiences

1. Introduction

World Health Organization (WHO) declared COVID-19 as a global pandemic on March 11, 2020. The COVID-19 pandemic has changed many things in the world, including BPS as the National Statistical Office (NSO) of Indonesia. The COVID-19 pandemic has forced people to avoid meeting in person. This has greatly impacted BPS-Statistics Indonesia activities nationally in collecting data and communicating data as well as activities at local BPS-Statistics Indonesia offices such as BPS-Statistics of Pulang Pisau regency office.

BPS-Statistics of Pulang Pisau Regency office is the statistical office responsible for statistics in the Pulang Pisau Regency in Central Kalimantan Province. BPS-Statistics of Pulang Pisau Regency office is under BPS-Statistics of the Central Kalimantan office. Pulang Pisau Regency is one of the thirteen regencies which comprise the Central Kalimantan Province on the island of Kalimantan (Borneo), Indonesia. The town of Pulang Pisau is the capital of Pulang Pisau Regency. The population of Pulang Pisau city was 134.499 at the 2020 Census.

There are many responsibilities of local statistical office in order to create best quality of statistic, one of which is communicating data. Data communication is very important in building awareness and statistical literacy in the community. People with high statistical literacy can help in providing accurate statistical data and use statistical data as the basis for various decisions they make. A data driven society is the key to high community productivity. However, BPS-Statistics of Pulang Pisau Regency office cannot rely on the BPS national office on how to build statistical literacy in the community in the Pulang Pisau Regency. BPS-Statistics of Pulang Pisau regency office must have its own strategy in building statistical literacy in the people of Pulang Pisau.

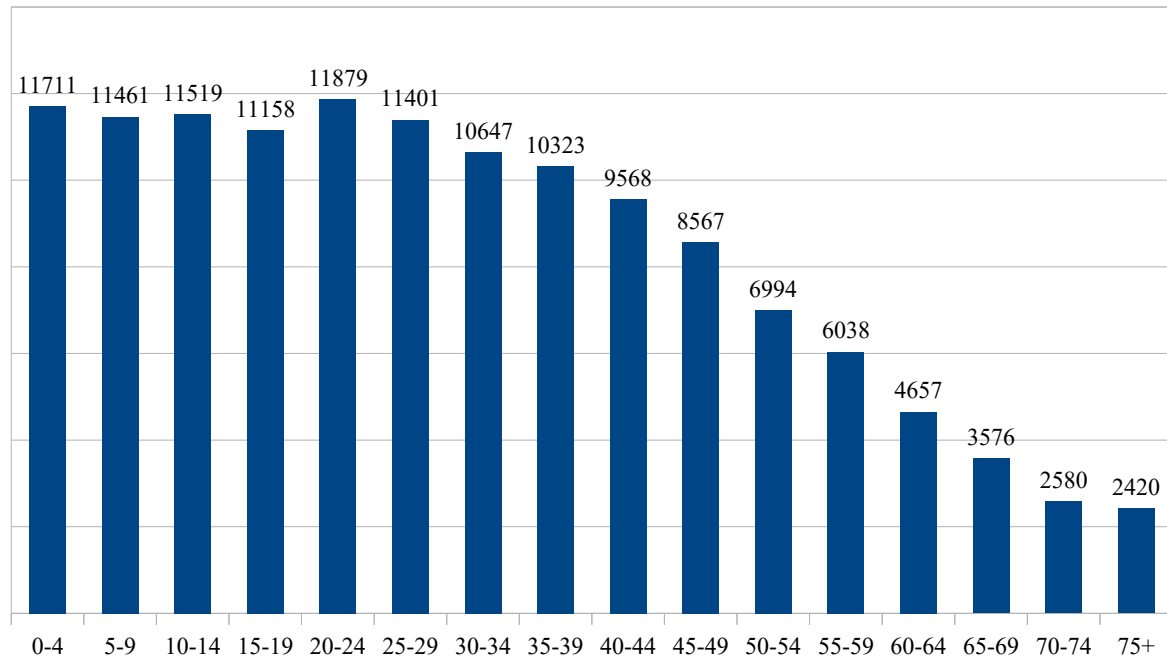


Figure 1. Population graph by age in Pulang Pisau regency, 2020

Figure 1 shows that Pulang Pisau Regency is dominated by 20-24 year olds. Pulang Pisau Regency is dominated by Generation Z who have been familiar with technology and the internet since they were kid. Destebasi (2016) mentioned that the internet is this generation's defining technology for literacy and learning within our global community. Targeting this age in communicating statistics is the right target audience because that age is in the middle where it can help the older ones and can guide the younger ones. Generation Z also has the characteristics of being easy to reach through social media. BPS-Statistics of Pulang Pisau office makes a strategy by creating statistical content that relates to this generation, one of which is the creation of infographic publications.

Dur (2018) in this study mentioned that infographic provides functional and aesthetic presentation of multilayered intensive information and processes that include not only visuals but also elements like audio, animation, and time depending on media. In the last study, Rudyansyah and Yuniati (2019) showed the successful use of BPS infographic publications at the national level. They managed to build great engagement through the publication of infographics. In this study, the BPS-Statistics of Pulang Pisau Regency office will adapt what has been done at the national level to be applied to the district level.

Research Question : Can infographic publications increase community engagement, especially during the COVID-19 pandemic?

2. Methodology

- What is an Infographic?

An infographic (which is short for information graphic) is a visual representation of information, which reveals the hidden, explains the complex, and illuminates the obscure through illustrations, some short written explanations and data visualization through charts or graphs (Yuvaraj, 2017). Infographics can be interpreted as a combination of illustrations, facts, and text. This makes many infographics that use storytelling techniques in their presentation. With such presentations, infographics are expected to make readers more interested and understand faster. Especially with the condition that data is sometimes difficult to understand, infographics have potential in terms of dissemination so that they can reach a wider audience.

Because the purpose of infographics is to attract readers, infographics must have an effective visual concept. Effective infographics are based on principles from the fields of psychology, usability, graphic design, and statistics to reduce barriers (limited time, information overload) to understanding important information. They, therefore, serve an important role in bridging the gap between producers and consumers of information (Otten et al., 2015). In simple terms, infographics should be able to simplify various data, facts, and information to be easy to understand. In other words, infographics can make heavy topics more comfortable to look at.

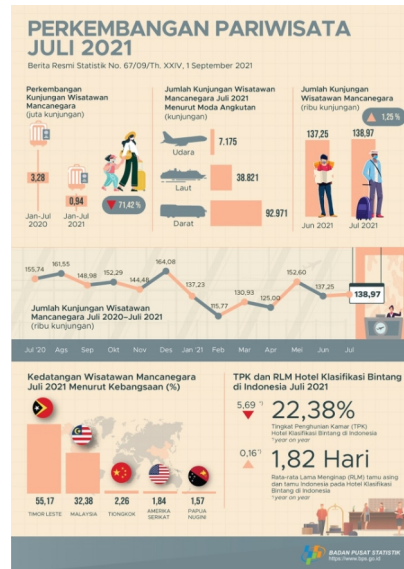
The use of infographics is increasingly being implemented in various media. Apart from social media, infographics are also popular in various newspapers. Several newspapers in the United States, for example, have popularized infographics in some news delivery content (Otten et al., 2015). This is because infographics are easier for the human brain to digest. Smiciklas (2012) explained several reasons infographics can work in the business world, including: (1) being easy to digest, (2) easy to share, (3) there is a "cool" factor.

- Infographics as Statistical Dissemination Material

Dissemination for a statistical office is very important. When the dissemination of statistics can be conveyed properly, the public will understand the importance of data, so that when the data is collected, the community as respondents will be more enthusiastic in providing actual data. With good data, stakeholders can plan and evaluate development more precisely. The importance of dissemination makes the statistical office work with various innovations so that statistical publications can be made as attractive as possible and reach more people.

Providing good statistical dissemination has also not gone unnoticed by BPS-Statistics Indonesia. In carrying out its vision for 2020-2024, namely Provider of Qualified Statistical Data for Advanced Indonesia, BPS-Statistics Indonesia strives to make the data released can be easily understood by many people. For this reason, several innovations need to be made when delivering data and information. One of the innovations of statistical dissemination is the use of infographics.

The use of infographics in dissemination and publication has been carried out by the BPS-Statistics Indonesia since several years ago. BPS-Statistics Indonesia uses infographics on various occasions, such as in published publications, on content on social media, and at the time of official statistical news releases that are published regularly every month, such as inflation indicators, farmer exchange rates, tourism indicators, export imports, and so on. etc. BPS-Statistics Indonesia has also in recent years published a publication that specifically contains infographics, namely Statistical Yearbook of Indonesia in Infographics, starting from 2017 until now.



(a) Statistical Yearbook of Indonesia in Infographics 2020

(b) Tourism Release Paper in Infographics

Figure 2. BPS-Statistics Indonesia Dissemination with Infographics

3. Result

- Statistical Infographic Publication in BPS Pulang Pisau

BPS-Statistics of Pulang Pisau Regency, as an extension of the BPS-Statistics Indonesia in the regions, recognizes the importance of using infographics in presenting statistics. Moreover, the level of education in Pulang Pisau Regency is not too high. The average length of schooling in Pulang Pisau in 2020 is 8.18 years. This figure is below the national average of 8.48 years. In the same year, the Human Development Index in Pulang Pisau was 68.45 and was below the national average of 71.94. Seeing these conditions, the delivery of statistical dissemination needs to be simplified and brought to a more enjoyable level so that it is easy for everyone to understand.

Actually, BPS-Statistics of Pulang Pisau Regency annually makes publications containing all information and data related to Pulang Pisau Regency. Previously, BPS-Statistics of Pulang Pisau Regency has made data dissemination several times using infographics displayed on various social media and in other publications. In printed publications, infographics are usually placed at the beginning of the chapter as a summary or description of the information contained in the chapter. While on social media, the infographics that are displayed are not published regularly, only at certain moments. Therefore, the publication of Pulang Pisau Regency in Infographics is needed so that there is a publication that specifically presents data using infographics.



(a) Infographics on Social Media in 2018



(b) Infographics in Publication "Pulang Pisau Regency in Figures 2021"

Figure 3. BPS-Statistics of Pulang Pisau Regency Dissemination with Infographics

The data used in this publication mainly comes from the publication of the Pulang Pisau Regency in Figures 2021 which contains various statistical data related to the Pulang Pisau district. Although in the publication the data is detailed, the information conveyed is generally still in the form of tables which may make it difficult for some people, especially those who are not familiar with tables and graphs of data, to digest the information. Only a few people who are familiar with data in the form of tables will easily understand the information. So to complete this publication and attract other people in data literacy, BPS-Statistics of Pulang Pisau Regency made an innovation in the form of making publications for Pulang Pisau Regency in Infographics 2021. This publication, which has just been published for the first time, contains a collection of infographics made as attractive as possible and made into several chapters, ranging from geographic, governmental, social, agricultural, and so on.

In making this infographic publication, the first step is to examine the data or information that will be included in the content. After that, the next stage is storyboarding and content construction. This stage is carried out jointly between the subject matter and the designer. Next, the designer will process the content into a visual form which will later become an infographic. At this stage, the designer will look for visual inspiration on other infographic designs or some social media. Then, the infographic that needs to be made needs to get approval from the subject matter and the leadership so that there are no publication errors. Finally, the subject matter releases the results of the publications that have been made.

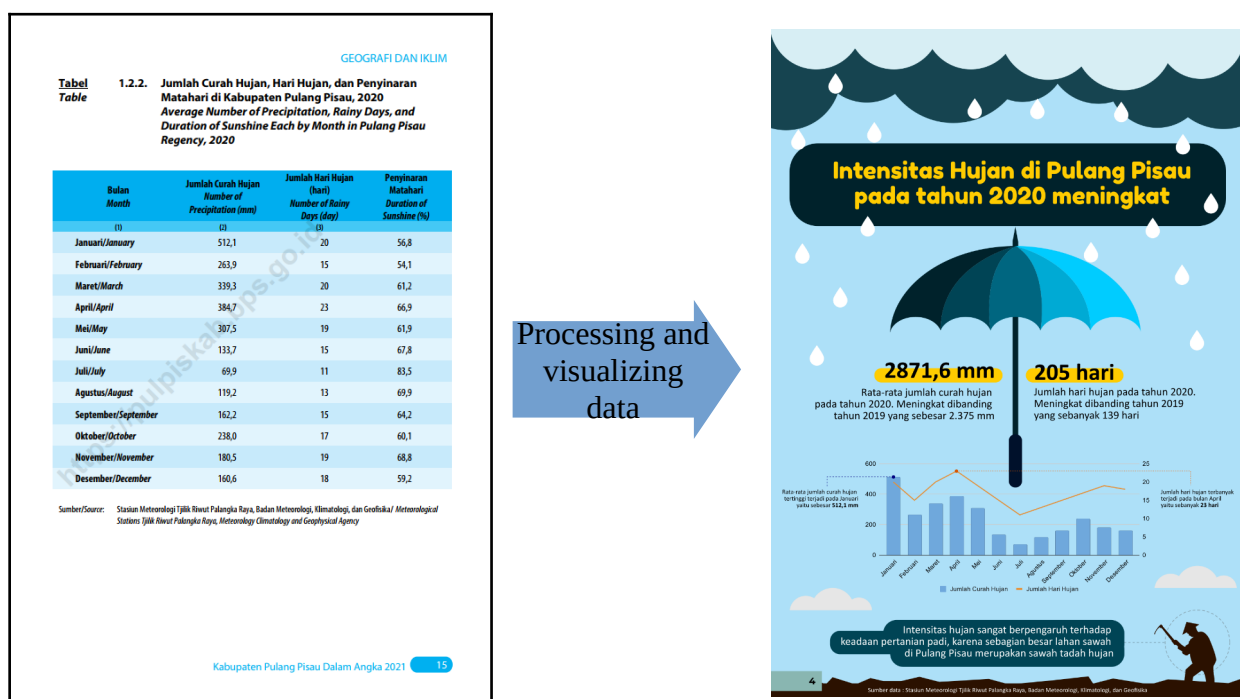


Figure 4. Examples of processes and data visualization to infographics

- Success measurements

In disseminating publications, BPS-Statistics of Pulang Pisau Regency uses social media to provide information that a publication has been released at that time. For example, the publication of Pulang Pisau Regency in Figures 2021 must be published every year in February. In informing the publication of the publication, BPS-Statistics of Pulang Pisau Regency exposes it through its social media, such as Instagram and Facebook. The same thing was done when the publication of Pulang Pisau Regency in an infographic was released.

The use of social media has shifted the dissemination of research from the “pull” model to the “push” model. The pull model requires people who are interested in ongoing scientific research to search for information; push models allow creators to send information more directly to potentially

interested parties. In the attraction model, the audience must have the initiative to find scientific research; in the push model, it is the researcher who initiates the communication with the audience (Allen et al., 2013).

In the dissemination, BPS-Statistics of Pulang Pisau Regency has several social media accounts, one of which uses Facebook and Instagram. Through these two social media, BPS-Statistics of Pulang Pisau Regency conveys some information on statistical activities, including the release of a publication. Interestingly, the release post regarding the publication of Pulang Pisau in the 2021 Infographics was able to reach more audiences both on Facebook and on Instagram than when the publication of Pulang Pisau in Figures 2021 (Table 1) was released.

Tabel 1. Comparison of the release of Pulang Pisau Regency in Figures 2021 and Pulang Pisau Regency in Infographics 2021 on Social Media

Post	Picture	Date	Reach Facebook	Reach Instagram
The release of Pulang Pisau Regency in Figures 2021		February 26, 2021	592	278
The release of Pulang Pisau Regency in Infographics 2021		June 5, 2021	829	479

Attention to the publication of this infographic can also be seen from the number of people who access the official website of the BPS-Statistics of Pulang Pisau Regency. During the COVID-19 pandemic, visitors who came directly to the BPS-Statistics of Pulang Pisau Regency office experienced a decline. They certainly prefer to access data and information through the website to get the latest data and publications. According to the data collected, the number of website visitors soared in June, the month when the publication of this infographic was released. In June, the number of website visitors reached 1,299 visitors, far from visitors in other months. The number of unique visitors also reached its highest point in that month, which was 896 unique visitors. This figure illustrates that publications using infographics can attract the audience to view the data in a visual form, which can make the information easier to understand. In addition, in the period January-October 2021, BPS-Statistics of Pulang Pisau Regency has released 5 publications. Even though it is counted as a new publication, the publication of infographics can become the second most downloaded publication on the BPS-Statistics of Pulang Pisau Regency website this year.

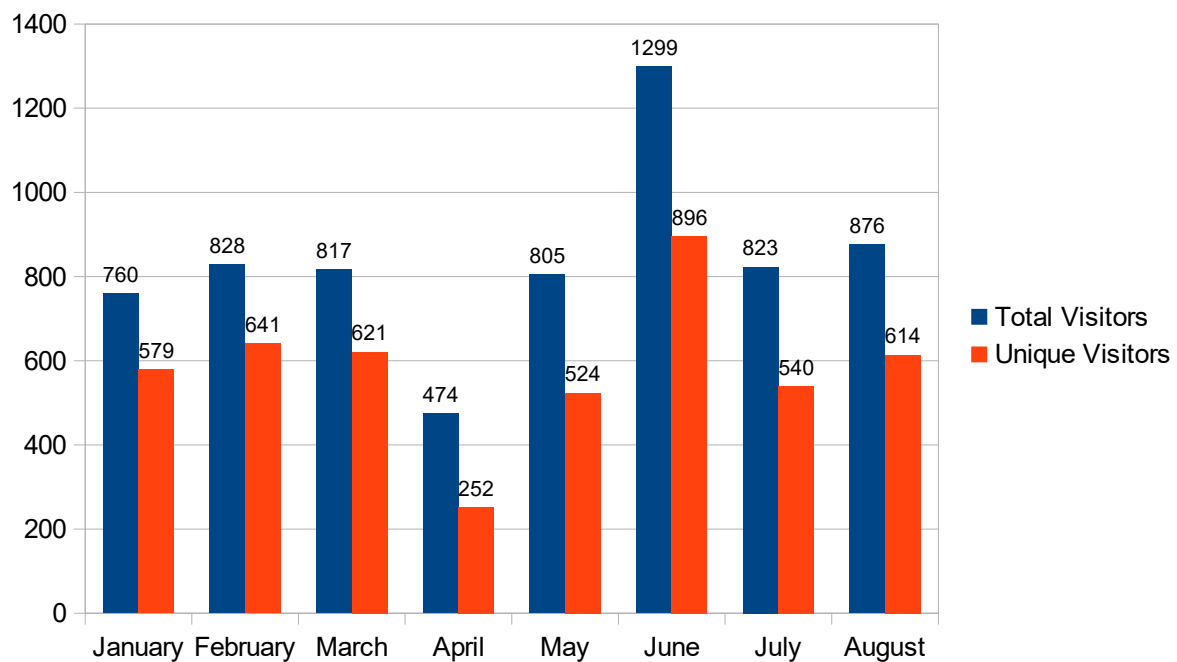


Figure 5. BPS-Statistics of Pulang Pisau Regency Website Visitor each Month, 2021

Tabel 2. Sum of Hit Download of Publication on Website per September 18, 2021

No	Publication	Release Date	Hit Download
1	Pulang Pisau Regency in Figures 2021	February 26, 2021	536
2	Pulang Pisau Regency in Infographics 2021	June 03, 2021	269
3	Gross Regional Domestic Product of Pulang Pisau Regency by Industry 2016-2020	April 05, 2021	57
4	Gross Regional Domestic Product of Pulang Pisau Regency by Expenditure 2016-2020	April 29, 2021	39
5	Analysis of Data Needs Survey Results of Pulang Pisau Regency 2020	April 30, 2021	35

4. Conclusion

Statistical data and information are often considered a heavy topic for some circles. For that, a statistical office requires good dissemination in publishing statistical figures. One way to do this is to use infographics. Infographics are seen to be able to attract a wider audience.

BPS-Statistics Indonesia has used infographics as part of statistical dissemination in recent years. The BPS-Statistics of Pulang Pisau Regency did the same thing. In 2021, BPS-Statistics of Pulang Pisau Regency made a publication that specifically contains information with various interesting infographics. Based on the results of the analysis on social media, this publication was indeed able to attract a large audience. Even when this publication was released, visitors to the BPS-Statistics of Pulang Pisau Regency website also experienced an increase. The number of people who download this publication is also a reference that infographics are indeed one of the good innovations in statistical dissemination.

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