

Building Statistical Literacy through Youtube

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Abstract

Indonesia and several other developed countries are still data-blind (data illiterate) and drown in authoritarian-verbal culture despite marginalized the measurable pattern of communication. Building society's awareness on how important statistic data has become big challenge for every NSO. BPS as Indonesia's NSO must provide simple data for ordinary people to understand. Not only being presented simply, but also reachable by all people. In order to answer that challenge, BPS has continually innovating using various communication tools, in which, one of them is social media.

Based on 2019 Global Digital Report by Hoosuite and We are Social, per January 2019, active social media user in the world has reached approximately 3,484 billion users or about 45% of world population. In Indonesia alone, the active social media user is about 150 million users or about 56% population of Indonesia. Amongst all social media, Youtube is the most famous social media platform with 88% access by Internet users in Indonesia. Youtube is a social media platform mainly focused on video content. On its progress, Youtube has many facilities such as LIVE that enables its users to do LIVE broadcast.

BPS has created Youtube account since November 11th 2015. By now, the total of BPS Statistics' official subscribes have reached twenty two thousand users. There are various approach video done by BPS in doing variety of statistics activities socialization to people through Youtube; for instance, Vlog, Indonesian statistics videography publication, and many other video information. The videos in BPS' Youtube are uploaded routinely to increase people's enthusiasm in enjoying variety of statistics information and activities.

Videography content that is wrapped interestingly makes the socialization as enjoyable show that can easily be accepted by people. By using Youtube social media, all information about statistics can be reached by everyone. The BPS Videos can also be watched whenever and wherever, thus Youtube becomes effective communication tools in investing statistics knowledge to people.

CONFERENCE OF EUROPEAN STATISTICIANS

Expert Meeting on the Dissemination and Communication of Statistics

13-15 October 2021, Online

Building Statistical Literacy through Youtube

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Abstract

Indonesia and several other developed countries are still data-blind (data illiterate) and drown in authoritarian-verbal culture despite marginalized the measurable pattern of communication. Building society's awareness on how important statistic data has become big challenge for every NSO. BPS as Indonesia's NSO must provide simple data for ordinary people to understand. Not only being presented simply, but also reachable by all people. In order to answer that challenge, BPS has continually innovating using various communication tools, in which, one of them is social media.

Based on 2021 Global Digital Report by Hoosuite and We are Social, per July 2021, active social media user in the world has reached approximately 4,48 billion users or about 56,8% of world population. In Indonesia, the active social media user is about 170 million users or about 61,8% population of Indonesia per January 2021. Amongst all social media, Youtube is the most famous social media platform with 93,8% access by Internet users in Indonesia. Youtube is a social media platform mainly focused on video content. On its progress, Youtube has many facilities such as LIVE that enables its users to do LIVE broadcast.

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Keywords: social media, video, broadcasting.

Topics: S3 Statistics Explained

1. Introduction

One of the biggest problems in a developing country such as Indonesia is the society's low awareness of the data. According to Jousairi (2018) Indonesia and several other developed countries are still data-blind (data illiterate) and drown in authoritarian-verbal culture despite marginalized the measurable pattern of communication. thus, makes it easier for the false news (hoax) to spread among the society in the developing countries. the statistical data also becomes an important key for the government in determining the government policy as well as for the society in order to understand the fact that is happening. Developing countries, which are data-blind / fond of statistical illiteracy, are more likely to fall behind from Developed countries that use data as one principle of determining choices.

Ferligoj (2015) mentioned that educational institutions, statistical offices, statistical associations, and the media are several actors that are able to contribute to statistical literacy. Badan Pusat Statistik (BPS) as Indonesia's National Statistical Office (NSO) must provide simple data for ordinary people to understand. Not only presented simply, but also should be able to be reached by all people. In order to answer that challenge, BPS has continually innovating using various communication tools. Previously, BPS used traditional media such as printed media and broadcast media to share numbers of statistical information to society. But it was very expensive and less effective.

Internet changes people's communicating behavior; with the development of Internet, Social media become BPS' choice as sufficient communication in building statistical literacy. Based on 2021 Global Digital Report by Hoosuite and We are Social, per July 2021, active social media user in the world has reached approximately 4,48 billion users or about 56,8% of world population. In Indonesia, the active social media users per January 2021 is about 170 million users or about 61,8% population of Indonesia. On average, Indonesian people spend approximately 3 hours and 14 minutes for Social Media. However, amongst all social media, Youtube is the most famous social media platform with 93,8% access by Internet users aged 16 to 64 in Indonesia. Youtube is a social media platform mainly focused on video content. On its progress, Youtube has many facilities such as LIVE that enables its users to do LIVE broadcast.

Youtube as the biggest video content platform in the world is developing even to its role in digital literacy segment and the development of knowledge. YouTube EDU (<http://www.youtube.com/edu>) illustrates a portion of the growing academic presence on YouTube as colleges and universities establish institutional channels through which they share videotaped lectures and campus events. YouTube has become a topic of discussion and inquiry within the scholarly literature as educators and researchers grapple with questions about the possibilities and problems associated with social media (Chenail, 2008; Snelson, 2009, 2010).

Youtube's ability as communication and education tools has yet been utilized to build statistical literacy among people. Youtube can reach people wherever they are and in real time as long as there is Internet. Youtube utilization in statistical illiteracy is going to help in order to achieve the action movement for 2030 statistics that leave no one behind and nowhere behind. Sustainable Development Goals (SDGs) can only be achieved if we are marching together and thus we need communication tools and effective education in order to have engaging and investing users in statistics.

So far, there is not many research done by NSO about the usage of Youtube in order to build statistical literacy for people. Hence, the goal of this paper is to see and review how BPS build statistical literacy to Indonesian people.

2. Methodology:

A. Youtube Dissemination Method

Right now the world has awakened the new culture in communication, that is communication through social media. Raut and Patil (2016) declared that social media is built on the idea of how people know and interact with each other. It provides power to share, make the world more open and connected with each other. Viral social marketing is one of strongest aspects of social media (Gosselin and Poitras, 2008). Because, it could reach out to many more people, more quickly and with minimal costs, compared to other forms of marketing technique and the most famous social media in Indonesia is Youtube.

BPS has created Youtube account since November 11th 2015. By now, the total of BPS Statistics' official subscribes have reached more than seven thousand users. There are various approach video done by BPS in doing variety of statistics activities socialization to people through Youtube; for instance, Vlog, Indonesian statistics videography publication, and many other video information.

The videos in BPS' Youtube are uploaded routinely to increase people's enthusiasm in enjoying variety of statistics information and activities. Videography content that is wrapped interestingly makes the publication as enjoyable show that can easily be accepted by people.



Figure 1. Official Youtube of Statistics Indonesia

B. Youtube in Literacy Program

Using the Internet in education has a positive influence on the learning and teaching process. (Rice at al. 2011). Wu et al. (2002) examined the effective use of videos on the Internet and recommended several directions and approaches that stressed the effectiveness of using videos in education. According to a study by Boster et al. (2006), videos can affect educational achievement in a positive way. Moreover, the study stressed that there is a lacuna in using clips or videos in class. Additionally, the researchers indicated that video applications have a positive influence on learners' performance in social studies and science. According to Bonk (2009), YouTube is considered an attractive social medium that contributes to global education. BPS seen this as an opportunity to increase statistical literacy to Indonesian people. An issue on statistical literacy highlighted by UNECE (2012) is transparency. It is a keyword in how to help people (users) to understand the data. The better people are informed about how to evaluate figures and the reliability of statistics, the easier they can assess the meaning and quality of the data. Furthermore, BPS also use Youtube as training material for BPS employees in Indonesia. This is very effective and cost-friendly because all of the information is downloadable and watchable whenever and wherever by the employees.

C. Live Data Release

Every beginning and in the middle of the month, BPS makes live data release on official Youtube account of BPS. The release is able to be watched real time, directly from every part of the world by accessing BPS' Youtube account. This makes it easy for data users whom have waited for BPS data release without having to go to BPS directly. In each beginning of the month BPS releases inflation data and in the middle of the month BPS releases Export-Import data. There is also other data release during live such as census result, Village Potential Data Collection, and so on.

3. Result:

A. Statistic Literacy, Dissemination, and Live Videos

Videos made for official BPS Youtube content are made for building statistical literacy in people, the needs of dissemination, and also for live broadcasting when releasing data. Video content of BPS' Youtube are made by public relation team at BPS' Centre. Each BPS' province and regency / city has special team to make Video content of each BPS' official Youtube account. Normally BPS recruits the Millenials to increase team's creativity. There are several play list available in Official BPS' Centre, they are content about Population Census, BPS Releases, Highlights, Videography, Short Movies, Employee Figures, and etc.



Figure 2. Head of Indonesian's BPS is releasing export-import data through Live on Official BPS Youtube Account in September 15th 2021 regarding Covid-19 Pandemic that is causing the prohibition to gather

B. People Reached – Statistic Users

In order to see how effective a video is reaching people, BPS makes evaluation of visitor statistic whom watched the video content. From the statistics we are able to figure how effective the usage of Youtube as communication tools to reach people. Until now (September 20th 2021) total views of all video content in BPS Official Youtube Account have reached 1729352 views with total 197239,3707 watch time hours of visitors. The subscribers of BPS Centre's Official Youtube

account is 23,5K. However, this data is limited to BPS Central Official Youtube. Each BPS' province and regency / city has its each BPS' official Youtube account. It means that there are 34 BPS provincial official Youtube accounts, and 514 BPS Official Youtube account of 514 regencies / cities. If all views are combined, of course the amount will be far more than the BPS' Central Official Youtube alone. Each BPS official Youtube has its own content according to the needs in their respective regions.

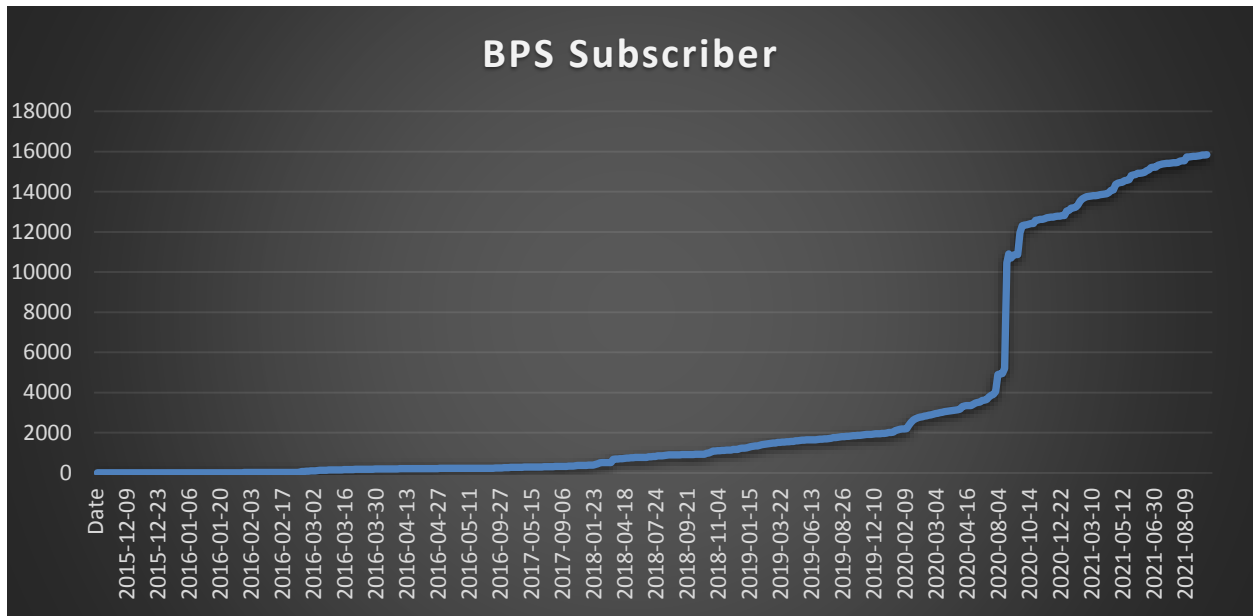


Figure 3 BPS Official Youtube Subscriber

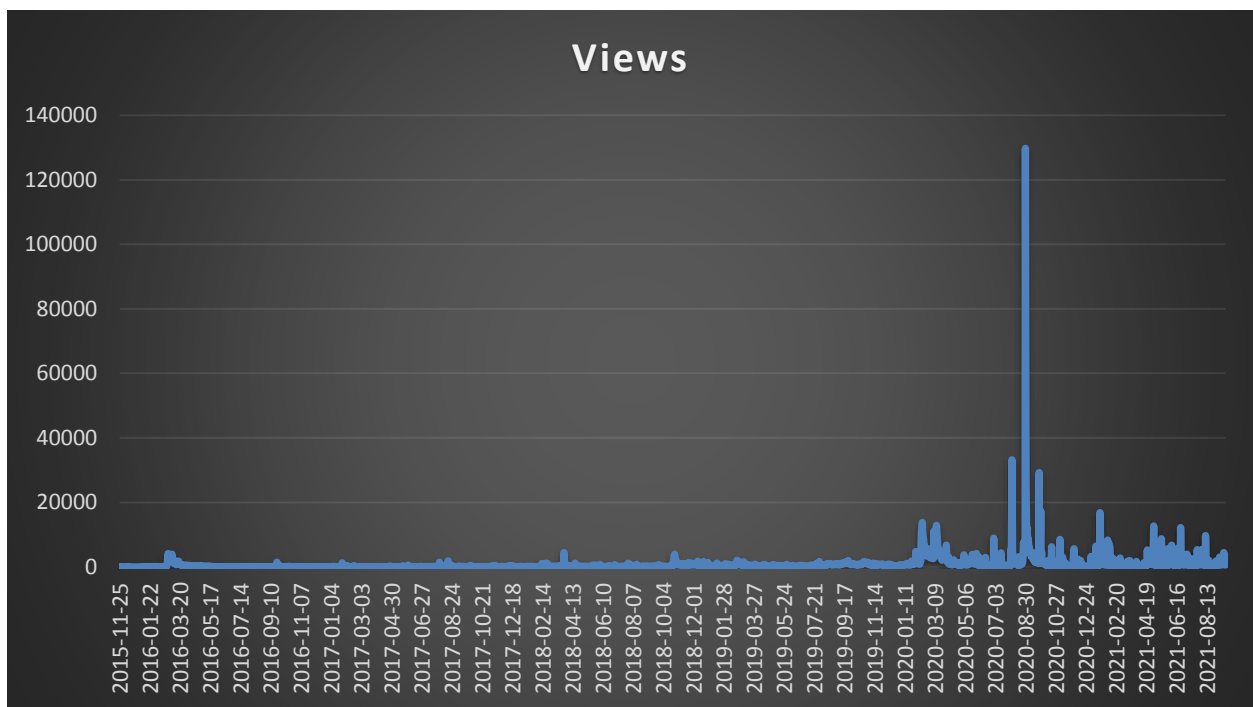


Figure 4. BPS Youtube views all time

From figure 4 we can see people's enthusiasm which is keep increasing to watch video content in BPS Official Youtube from year to year especially in 2020. This aligns with the increase of the new social media users from year to year. In 2016 BPS had higher views than in 2017 because in 2016 BPS was enlivening the 2016 Economic Census. At that time, the uploaded video content was more than usual. Nevertheless, the views are increasing. there was an increase in views in July 2020 to coincide with the start of the 2020 population census. From Picture 4 we can see that there is trend of BPS Youtube visitor increasement in the first month of Covid-19 occurance in March 2020. The increasement was slightly depleted because the content was less due to work from home adaptation on March 2020. The increasement trend creates opportunity for BPS to make use of Youtube as effective communication tools to reach the people during Covid-19 pandemic

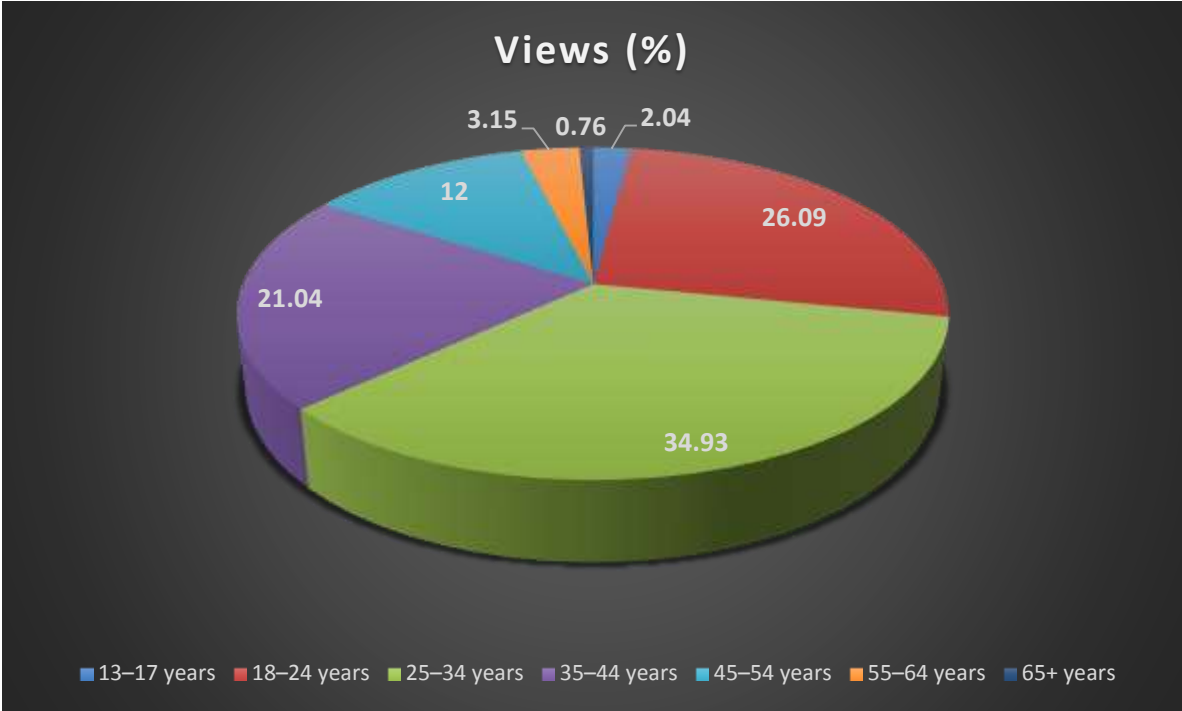


Figure 5. Percentage of BPS official Youtube Viewers according to age range group

Figure 5 shows how Millenials and Generation Z are dominating. If combined, more than 70% viewers are dominated by this two generation. The Millenials and Generation Z are growing together with the increase of technology and communication advancement. Those generations are familiar with using Social Media and Internet. Therefore, they are the best target for the wrapped content made by BPS Official Youtube. In picture 5 we can see that BPS Youtube subscribers are dominated by men with 58.64%.

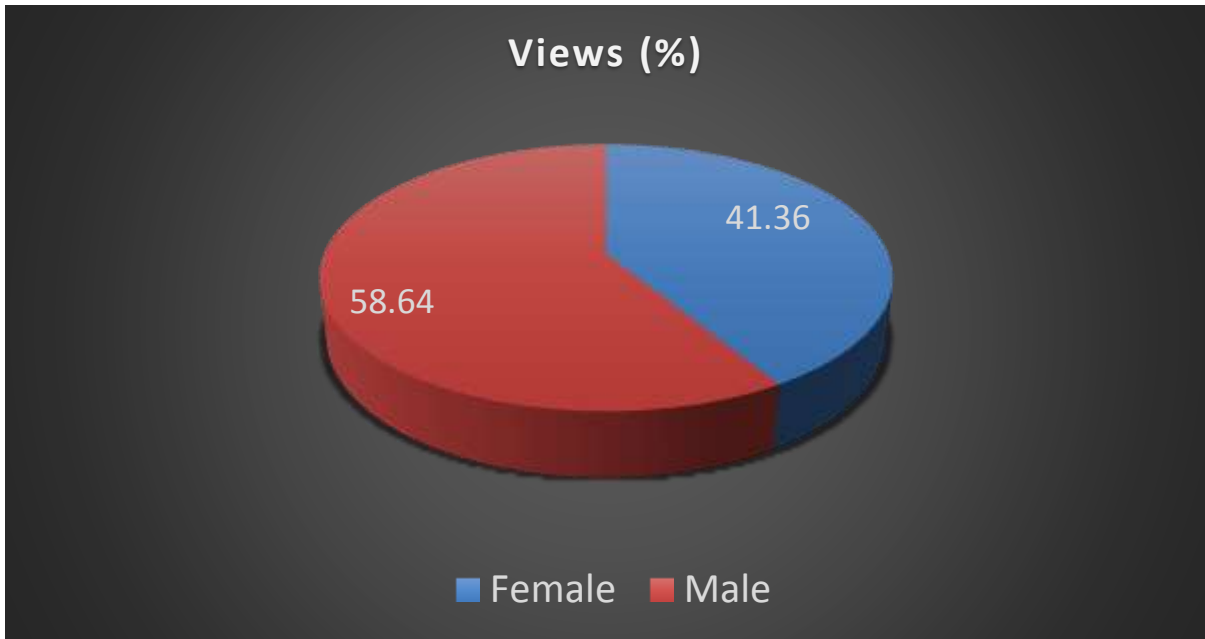


Figure 6. Percentage of BPS official Youtube Viewers according to age range group

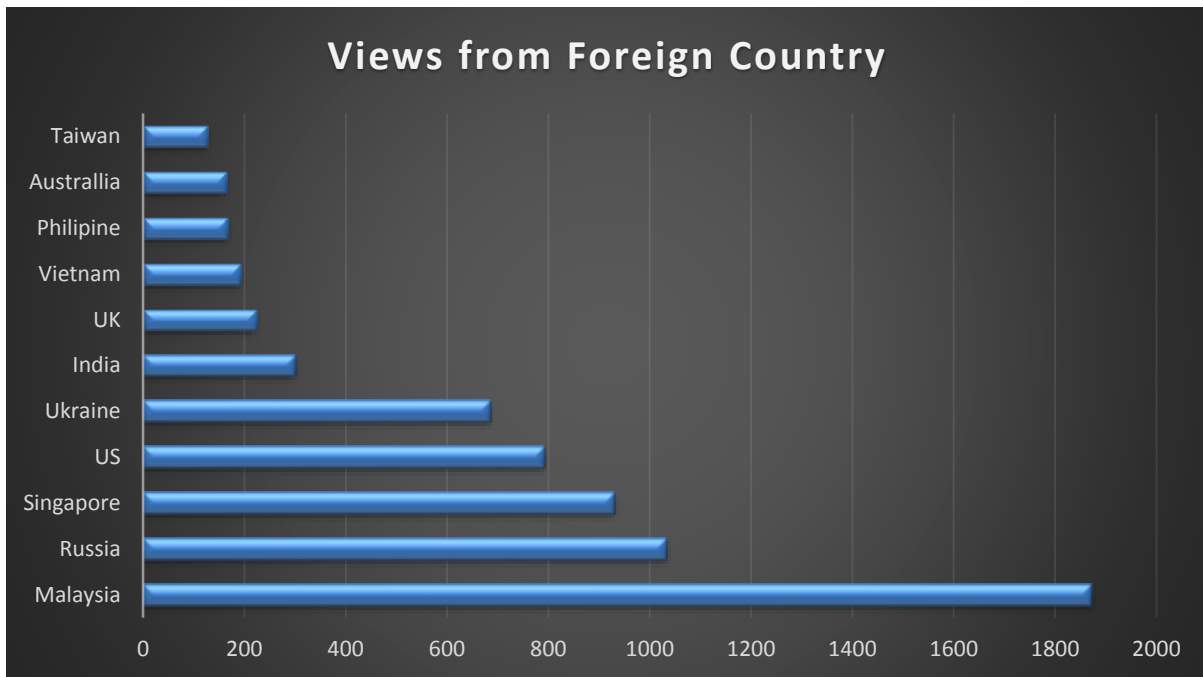


Figure 7. Graph of BPS' Youtube viewers from various countries aside from Indonesia

From Figure 7 we are able to see the enthusiasm of BPS' Youtube content viewers outside of Indonesia. This shows how Youtube makes distance is longer an obstacle in accessing

information. It also shows how BPS' Official Youtube is able to reach various kind of people outside Indonesia. Malaysia has the most visitors, followed by Russia and Singapore.

4. Discussion, Conclusion and Recommendations:

Video with the most view of BPS' Official Youtube per September 2021 is a video entitled "Kick Off Sensus Penduduk September 2020". This video is a live video of the start of the 2020 population census in Indonesia. Live streaming video was held on 31 August 2020. The video managed to get 25214 comments, 1725 shares, 6597 likes, and 130359 views.

Building Official Youtube account is not easy. First, we need all the help from employees and BPS partner colleagues to spread the official account made. Aside from informing all people about the official account, continuous maintenance account is also needed. NSO as the one who made the official account must make a special team focused on maintaining it routinely as well as making schedule and the upcoming content to be uploaded.

Having official social media account means that NSO must be prepared to face people directly. There will be a lot of people that give their comment in the videos. It varies from the inquiries, positive feedbacks, as well as negatives. Furthermore, the social media administrators must be responsive and of course, careful in answering. Because every answers from admins is seen by people whom are accessing Youtube. It is also needed to make branding regarding what kind of official account that is going to be built.

References:

- Bonk, J 2009, *The world is open: How web technology is revolutionizing education*. San Francisco: Jossey-Bass. ISBN# 9780470461303. Elsevier
- Chenail. R. J. (2008). YouTube as a qualitative research asset: reviewing user generated videos as learning resources. *The Weekly Qualitative Reports*, 1(4), 18-24. Retrieved from <http://www.nova.edu/sss/QR/WQR/youtube.pdf>
- Ferligoj, Anuska. 2015. How to Improve Statistical Literacy? *Metodoloski zvezki*, Vol 12(1), p 1-10.
- Gosselin. P. & Poitras. P. (2008). Use of an Internet "Viral" Marketing Software Platform in Health Promotion. *J Med Internet Res*. Vol 10(4), e47
- Hasbullah, Jousairi (31 July 2018). "Bahaya Buta Data." *Kompas* [Indonesia]. Print.
- Raut. V. and Patil P. (2016). Use of Social Media in Education: Positive and Negative Impact on the Students. *International Journal on Recent and Innovation Trends in Computing and Communication* Vol 4, Issue 1.

Rice, K, Cullen, J, & Davis, F 2011, *Technology in the Classroom: The Impact of Teacher's Technology Use and Constructivism*. Retrieved from edtech2. boisestate. ___Published by European Centre for Research Training and Development UK (www.eajournals.org) edu/cullenj/.../Cullen_Davis_Final_Synthesis_Paper. docx.

We Are Social and Hootsuite. (22 April 2020). Digital 2020 : Global Internet Use Accelerates. Accessed in 25 April 2020.

Wu, D, Hou, Y, Zhu, W, Zhang, Y & Peha, J, 2002, *Streaming video over the Internet: approaches and directions*. Circuits and Systems for Video Technology, IEEE Transactions on, 11(3), pp.282--300