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A Documentary Film on Bio Gas for Farmer Groups: An Implementation of Information Media

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ABSTRACT

Simantri, also known as the Integrated Farming System, is an agricultural program designed to enhance the well-being of farmers, alleviate poverty, and reduce unemployment. One of the initiatives undertaken by Simantri is the generation of biogas. Over the past few years, the Simantri Farmer Group has engaged in the development of biogas products, resulting in the creation of a diverse range of products that cater to the needs of the local community. Nevertheless, a significant number of individuals residing in Br. Sandakan, Sulangai, Petang remain uninformed about the biogas goods. The findings of the interViews performed in Sulangai Village provided more support for this assertion, since 70% of the 30 participants expressed a lack of awareness regarding the biogas products. Approximately 30% of the participants shown awareness regarding the biogas products. The objective of this study is to disseminate knowledge to the community in Br. Sandakan by utilizing a documentary video-based methodology to introduce biogas goods. The present study employed a qualitative methodology. The research employed many methodologies, such as observation, interviews, and questionnaires. The media creation method for showcasing the biogas products of the Simantri Farmer Group in Br. Sandakan, Sulangai, Petang, involved three distinct stages: pre-production, production, and post-production. The research findings suggest that the use of documentary video-based information media is efficacious in acquainted the community in Br. Sandakan with biogas goods.

Keywords:
Bio Gas, Farmer Group, Documentary Film

INTRODUCTION

Indonesia is a tropical country that is rich in natural resources, both in agriculture and animal husbandry. Bali Province is one of the provinces in Indonesia which has various superior sectors such as tourism and agriculture. The agricultural sector is one sector that receives considerable attention from local governments because of its very important role in providing food sources. Proof of his attention is the creation of programs in the agricultural sector. One of the programs is Simantri (Integrated Agricultural System).

In Bali Governor Regulation Number 29 of 2010(Tentang Keberlanjutan Program Simantri, n.d.), simantri is defined as innovation in accelerating the adoption of agricultural

technology in rural communities. According to Aryana et al. (2016)(Aryana et al., 2016)stated that the simantri program was directed at encouraging increased welfare of farmers, reducing poverty rates, and reducing unemployment rates. The integrated business carried out in the simantri program is the cultivation of plants and livestock. Waste from plants is processed into animal feed and feed reserves during the dry season, while waste from livestock such as feces and urine is processed into bio gas, bio urine, organic fertilizer and bio pesticides.(Dinas Pertanian Tanaman Pangan Provinsi Bali, 2012)stated that each simantri group consists of 20 members of the farmer group (Poktan) who are given assistance by the Bali Government in the form of Bali cattle breeds, one colony cage unit, organic fertilizer processing facilities (solid and liquid), bio gas production and assistance.

Making bio gas is one way to meet the increasing energy needs. The current use of energy sources is still dominated by non-renewable fossil fuels such as petroleum, natural gas and coal. Fossil fuels that are used continuously contribute to the greenhouse effect which can trigger global warming.(Haryanto, 2017; Kougias & Angelidaki, 2018). Apart from that, there is also traditional fuel, namely wood, which is still used today, especially in rural areas. Firewood obtained from cutting down trees can gradually threaten nature conservation.

Bio gas is an alternative source of renewable and environmentally friendly energy as a substitute for fossil energy. Bio gas is formed from the process of decomposing organic materials by methanogenic bacteria in anaerobic conditions (without oxygen) (Wahyuni, 2013)(Wahyuni, 2013). Organic materials for making bio gas are usually the result of manure from cows, goats, buffalo, horses and others. Cow dung is the material most often used to make bio gas because it has a balanced nutritional content and is easy to dilute and process biologically.(Prihutama et al., 2017). According to(Wahyuni, 2013)On average, one cow weighing 400-500kg can produce 20-29kg of manure/day. Bio gas produced from livestock manure can be used for cooking, thereby reducing LPG gas purchases. Apart from that, bio gas waste can be processed into organic fertilizer which can be sold or used by farmers.

One area that has great potential for cow dung is Br.sadakan, Sulangai Village, Petang District, Badung Regency, Bali. Br.sadakan is a banjar that relies on its income from agriculture and animal husbandry. Almost all people have livestock as their savings, the most common being pigs and cows. The results from livestock manure are then processed by the Simantri Farmers Group into bio gas and organic fertilizer. The Simantri Farmers Group has been developing bio gas products for the last few years and has created products that can be used by the local community. However, there are still many people in Br. Sandakan who do not know about this bio gas product. This was confirmed by the results of the questionnaire in Br.sadakan, where 80% of the 30 respondents did not know about bio gas products. Only a few respondents knew about bio gas products, namely 20% of respondents. Based on this problem, it is necessary to create information media that can help the people in Br.sadakan to get to know the bio gas products made by the Simantri Farmers group better. Simantri 171 Puncak Tedung Sari is one of the farmer groups in Br. Sadakan, Sulangai Village. Members of Simantri 171 Puncak Tedung Sari are involved in agriculture and animal husbandry.

The information media that will be created is in the form of a documentary video showing the bio gas production process and the benefits that the community obtains when using this product(Setiawan et al., 2019, 2020; Winston, 2019). This documentary video will describe how bio gas products are made, how the production process takes place(Aitken,

2020; Borish et al., 2021), and how this product can help the people of Br.sadakan. With this information media, it is hoped that it can provide information to the Br.Sandakan community about bio gas products produced by the Simantri Farmers Group. By knowing more about bio gas products, the people of Sulangai Village can use these products more effectively and efficiently.

METHOD

This research will use a qualitative approach(Fadli, 2021; Ibrahim et al., 2023)with a focus on case studies. A qualitative approach will allow researchers to understand in depth how documentary video-based information media can influence public knowledge and acceptance of bio gas products from the Simantri Farmers Group in Br.sadakan, Sulangai, Petang.

RESULTS AND DISCUSSION

Implementation Stage

consists of three stages: pre-production, production, and post-production. At the production stage, photographs are taken with farmer groups and related sources. Then, an editing process is carried out to arrange scenes, story sequences, as well as adding supporting audio and visual elements. After the production stage is complete, a post-production stage is carried out which involves rendering the video into a playable format, as well as testing the quality of the video before being distributed to the public.

Production Stage

At the production stage there is a process for taking pictures used in documentary videos. In the shooting process, the author used hardware including a camera with 4K 60FPS support and a gimbal stabilizer. Apart from that, the author also applies shooting techniques such as bird eyes, long shoot, knee shoot, and one shoot to create documentary videos that have interesting and dynamic visual quality. The use of hardware and shooting techniques is the key to producing high quality documentary videos that captivate the audience.

Graphic Asset Creation Process

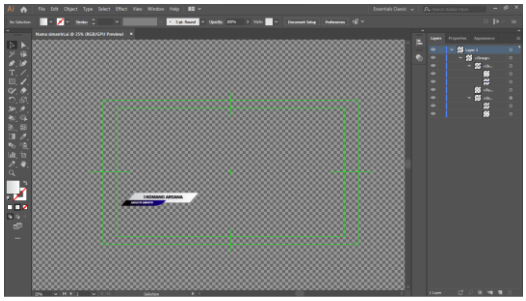

Figure 1. Graphic asset creation
(Source: author's personal archive)

Based on figure 1, it can be explained in the process of creating graphic assets, business cards and titles are important elements. Business cards are designed via Adobe Illustrator with a precise and scalable vector design approach. On the other hand, the title is given a creative effect on the letters using Adobe Photoshop, giving the opportunity to add artistic touches, such as shadow effects and light effects. The use of these two applications plays an important role in creating attractive and professional graphic designs.

Audio Record Stage

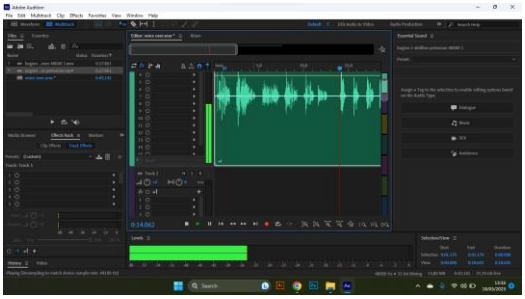

Figure 2. Sound recording
(Source: author's personal archive)

Based on figure 2, it can be explained that at this stage, voice over recording was carried out using the Adobe Audition application, editing was carried out, namely cutting parts that were deemed unnecessary and adding a noise reduction effect to remove noise from the sound so that it became clearer.

Editing Stage

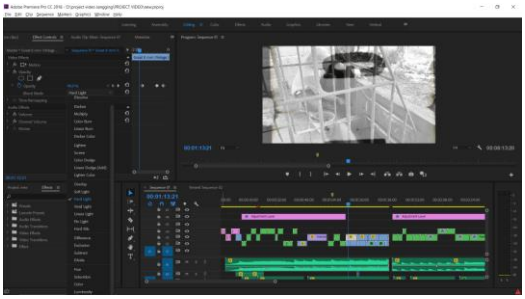

Figure 3. Editing process
(Source: author's personal archive)

Based on figure 3, it can be explained that video editing steps include merging videos that have been shot, adding sound effects to improve the viewing experience, applying stabilizing effects to improve video stability, using transitions to provide a smooth flow between scenes, providing dramatic effects such as slow motion or zoom, as well as the color grading stage which determines the atmosphere and color nuances in the video.

Post Production Stage

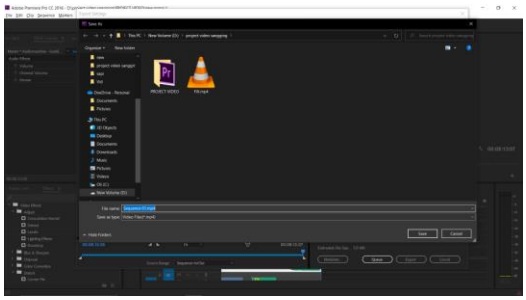

Figure 4. Rendering
(Source: author's personal archive)

Based on figure 4, it can be explained that after completing the editing process, an important stage in the post-production process is rendering the video in MP4 format. This format was chosen because it has wide compatibility with various devices and platforms. After rendering is complete, the processed video will be placed in the previously specified folder. Placing videos in well-organized folders makes it easier to access and use in the future. With these steps, the video is ready to be distributed, uploaded to online platforms, or used according to the needs and original purpose for which the video was created.

Distribution Stage

The process of distributing this information media is carried out via the YouTube platform in mp4 format. This information media was uploaded to the official Sulangai Village YouTube channel. After that, the media is distributed to the public as target users.

Figure 5. Documentary Video on the Sulangai Village Channel
(Source: author's personal archive)

CONCLUSION

Based on the results and discussion of research regarding information media for the introduction of bio gas products from the Simantri Farmers Group, Br. Sandakan, Sulangai, Petang based on documentary videos, several conclusions can be drawn: 1) The use of documentary video-based information media is effective in introducing bio gas products to the public. The documentary video provides a clear and interesting visualization of the production process, benefits and application of bio gas in the Simantri Br Farmers Group.

Sandakan. 2) Documentary videos as information media have the potential to increase public understanding and awareness of the importance of using bio gas as renewable energy. Information conveyed through video can be more easily understood and remembered by the audience. 3) Documentary video-based information media can expand the reach of information about bio gas products. Videos can be uploaded to online platforms such as YouTube or websites to be accessed by the wider community, including outside the village area. The use of documentary video-based information media also has the potential to promote the Simantri Br Farmers Group. Sandakan and increase the village's tourist attraction. Documentary videos can show potential tourists the beauty of the environment, agricultural activities and community life in Sulangai Petang village. 4) In developing documentary video-based information media, it is important to pay attention to technical factors such as audio, visual and editing quality. High quality videos will give a professional impression and increase audience appeal. 5) By utilizing documentary video-based information media, the Simantri Farmers Group Br. Sandakan can be more effective in introducing bio gas products to the community, increasing awareness of renewable energy, and promoting Sulangai Petang village as an attractive tourist destination.

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