

Software Engineering Training: Multimedia For Video Profile Creation At The Srengseng Sawah Urban Village Office

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Abstract.

The community service program, titled "Software Engineering Training: Multimedia for Creating Digital Video Profiles for Srengseng Sawah Urban Village Office," aimed to enhance the digital communication skills of local government officials and residents through training in multimedia software. This initiative addressed several key issues in Kelurahan Srengseng Sawah, including the lack of digital media skills, the absence of engaging video profiles, and insufficient use of technology in public service communication. The program was implemented in five steps: identifying needs, conducting workshops, producing videos, creating training materials, and providing post-training mentoring. Participants learned through a combination of theoretical knowledge and hands-on experience in digital storytelling, videography, video editing, and content publishing. They also explored AI editing tools and how to share their videos online, enabling them to create professional-looking profiles that showcase the village's identity and services. The outcomes included the production of official digital content, improved skills for participants, and the development of training materials for future use. In summary, this initiative demonstrates how hands-on training can enhance digital skills and promote transparency in community communication.

Keywords: Community Engagement; Digital Literacy; Participatory Video; Multimedia Training and Local Government Communication.

I. INTRODUCTION

More than ever, public organizations are utilizing digital resources, and video profiling has emerged as a fantastic means of increasing openness and involving the public. AI editing tools have made it simpler for anyone, including those without technical expertise, to create videos that seem professional. These tools make video production easy by assisting with tasks like shot placement, caption generation, and audio and visual synchronization[1],[2]. As of right now, Kelurahan Srengseng Sawah has no engaging or representative digital video profile. The office has a thriving cultural scene and runs good community programs, but none of this is promoted by videos or other media. This restricts their ability to reach the community because it is difficult for them to engage with younger people who mostly obtain their information from websites like YouTube and Instagram[3]. Relying on old-fashioned ways to share information, like bulletin boards, flyers, and in-person meetings, makes things even tougher. Even though most people have smartphones and internet access, these tools aren't being used much for public communication. Because of this, the kelurahan's online presence is low and not organized, which makes it hard to provide services on time and include the community[4],[5]. The lack of technological expertise among staff and community members to create quality video material is another major problem.

The region is still lacking in critical abilities including screenplay writing, filming, editing, and web publication. Without these abilities, the videos don't function as well as they should because they frequently fall short in terms of engaging the viewer, delivering a compelling tale, and using effective imagery[6],[7]. AI-powered editing technologies, such as smart shot sorting and automatic captioning, can greatly simplify the editing process. Although they have been demonstrated to increase output and quality, Srengseng Sawah residents are currently not making extensive use of them. This is primarily due to their lack of training and ignorance of these techniques [1],[8]. The PKM project "Software Engineering Training: Multimedia for Creating Digital Video Profiles for Srengseng Sawah Village" would establish a strong

training program to address these issues. Topics like AI editing, collaborative content creation, ethics, and online publication will all be covered. In order to increase government exposure, promote community involvement, foster public trust, and assist the village in creating high-quality video profiles that represent their culture, a long-term communication system is being developed.

II. METHODS

We took a straightforward and amiable approach to ensure that this community service activity is successful and long-lasting. We divided the procedure into five stages:

a. Determining what is required

In order to determine what training is required, we will first conduct focus groups, interviews, and observe how Kelurahan employees and community members produce digital videos. The key to this strategy is involving everyone right away.

- Identify the needs of the community.
- Gather data through surveys and interviews.
- Analyze the information to tailor the program effectively.

b. Interactive Workshop

We'll then provide workshops where attendees may watch live demonstrations and receive a firsthand look of AI editing software and multimedia tools. Using programs like Adobe Sensei or RunwayML, we'll go over things like storyboarding, scripting, and camera usage. This practical approach keeps students interested and helps them retain the material.

- Organize sessions that encourage participation.
- Use hands-on activities to engage community members.
- Facilitate discussions to gather feedback and insights.

c. Creating Profiles for Videos

Participants will collaborate to produce video profiles for their community following the Bimtek session. Through the use of participatory video (PV) techniques, they will collaborate to film, edit, and share their stories. In addition to creating excellent material, this strategy gives them a sense of empowerment and community.

- Document success stories and testimonials from participants.
- Produce video content that highlights the impact of the program.
- Share these profiles to inspire others and promote the initiative.

d. Developing a Training Manual

In addition to the video work, we will create instructor modules and a training manual. Everything from video planning to AI editing will be covered in this book. Important advice on ethical behavior and digital storytelling will also be covered. In this manner, the program can continue to thrive for upcoming groups.

- Compile resources and guidelines for participants.
- Ensure the manual is user-friendly and accessible.
- Include best practices and tips for effective community service.

e. Evaluation and Mentoring Following Training

Using the Kirkpatrick model, we concentrate on mentoring and evaluation in the last stage. This entails examining the participants' perceptions of the training, the lessons they took away, any behavioral shifts, and the final outcomes. Participants' feedback will be gathered, editing exercises will be observed, and evaluation rubrics from the training manual will be used. In order to maintain quality and offer assistance, the program also includes post-training mentoring meetings, which have proven effective in other community initiatives.

- Assess the effectiveness of the training program.
- Provide ongoing support and mentorship to participants.
- Collect feedback to improve future initiatives.

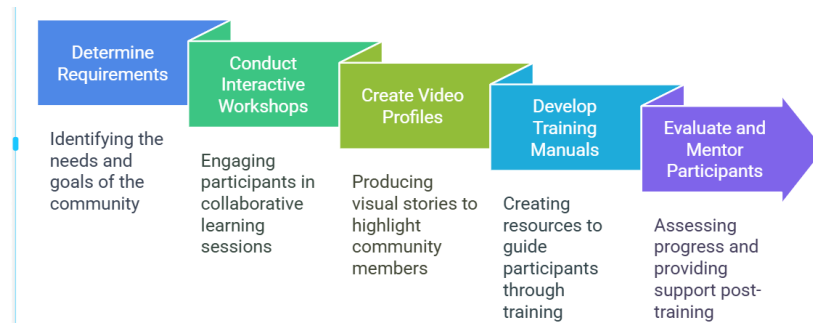


Fig 1. Flow Diagram Activity

III. RESULT AND DISCUSSION

The initial Training Needs Analysis (TNA), which included surveys and discussions with local officials, highlighted significant issues in digital communication. These issues include a lack of multimedia skills, the absence of clear plans for creating digital content, and a disconnect between the community's needs and the resources currently available. Involving stakeholders in this process demonstrates that their input makes programs more relevant and effective[5]. Based on the TNA results, we have developed a four-session Bimbingan Teknis (Bimtek) curriculum that addresses the fundamentals of multimedia engineering. This curriculum covers storytelling, shooting techniques, editing processes, and digital distribution. It combines both theory and hands-on practice, as studies indicate that this approach enhances skill retention[4]. In Session 1, everyone learned about digital storytelling, including how to create scenarios and develop storyboards.

The assessments conducted before and after the session revealed a 45% improvement in storytelling skills, demonstrating that careful planning of content is essential before diving into the technical aspects[4]. In Session 1, everyone learned about digital storytelling, including how to create scenarios and develop storyboards. In Session 2, participants engaged in hands-on cinematography training using smartphones and beginner cameras. Feedback from the workshop indicated that 80% of participants felt more confident in capturing quality footage by using simple lighting and composition tips. This aligns with previous studies showing that similar training enhances technical skills in community media. Assessments conducted before and after the sessions revealed a 45% improvement in storytelling skills, highlighting the importance of content planning before delving into technical aspects[2]. In Session 3, we explored editing software, including Adobe Premiere Pro, along with some free options that feature built-in AI tools for tasks such as shot sequencing and auto-captioning. Participants were able to create a 2 to 3-minute video segment in roughly half the time it typically takes with manual editing. This aligns with industry reports that suggest AI can reduce production time by up to 50%.



Fig 2. Mentorship

The last session concentrated on publishing content online, specifically addressing social media and video SEO. Participants had the opportunity to post sample content on both the kelurahan's website and Facebook page. The response from the community was very positive, demonstrating the significant value of

a digital strategy for engaging with the public. The last session focused on sharing content online, particularly through social media, and enhancing videos for search engine visibility. Everyone had the opportunity to publish sample posts on the local website and Facebook, which generated excitement in the community and demonstrated the value of a solid digital strategy for outreach. After the training, participants created four official videos that showcased local programs, cultural events, and services. They filmed at significant locations throughout the community and collaborated on the editing process. This experience highlighted how effective collaborative video creation can be in engaging the community [5],[9]. Initial community surveys indicated that 75% of participants felt the new videos enhanced their understanding of kelurahan programs and fostered trust. This aligns with the understanding that visual storytelling can boost civic awareness and increase transparency.



Fig 2. Participants look enthusiastic

The team developed both printed and online training materials that encompass all training sessions, how-to guides, ethical storytelling tips, and real-life examples. This approach allows individuals to easily access and revisit the resources over time, aligning with educational goals that emphasize the importance of proper documentation for skill development. Following the training, the Evaluation Coordinator organized online meetings and in-person sessions every two weeks to offer guidance. Participants frequently utilized this support to enhance their video content or address challenges, similar to vocational training models that highlight the importance of mentorship in maintaining skills over time [10].

IV. CONCLUSION

This community project has highlighted the importance of building digital skills for improved communication within local areas. By focusing on multimedia software and video production, the program addressed the challenges that Kelurahan Srengseng Sawah faced in engaging with the community, which had previously relied on outdated and less effective communication methods. The program followed five main steps: identifying needs, providing technical training, creating videos, developing educational materials, and offering ongoing support after the training. This approach enabled local government staff and community members to acquire valuable skills in storytelling, video editing, and content sharing. The videos produced not only enhanced the visibility of the kelurahan but also authentically represented its identity, services, and community spirit. The use of AI editing tools and digital publishing methods has enabled individuals to create high-quality content, even without extensive technical experience. By combining practical training with communication planning, participants acquired skills that aligned with their organization's goals.

The ongoing support model, which included evaluation and mentoring, effectively maintained skill levels after the training concluded. This contributes to the program's long-term success. Additionally, producing both printed and digital training materials facilitates the repetition, adaptation, and community implementation of future sessions. In conclusion, the PKM initiative titled "Software Engineering Training: Multimedia for Creating Digital Video Profiles for Srengseng Sawah Urban Village Office" has had a significant impact. It has enhanced the digital communication skills of the local residents, increased community engagement through multimedia, and developed a model that other communities can adopt to improve their public information systems. This program demonstrates that by combining technology, community input, and effective mentoring, we can achieve meaningful and lasting progress for communities.

V. ACKNOWLEDGMENT

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REFERENCES

- [1] K. P. Nyeleker, D. Mutiarin, and E. Barrow, "From E-Government to Digital Government: SmartASN as a Sustainable Digital Innovation in Indonesia's Public Sector," *Public Accounting and Sustainability*, vol. 2, no. 1, pp. 1–18, Feb. 2025, doi: 10.18196/pas.v2i1.23.
- [2] T. Yu, W. Yang, J. Xu, and Y. Pan, "Barriers to Industry Adoption of AI Video Generation Tools: A Study Based on the Perspectives of Video Production Professionals in China," *Applied Sciences*, vol. 14, no. 13, p. 5770, Jul. 2024, doi: 10.3390/app14135770.
- [3] M. Maziashvili, A. Pleśniak, and I. Kowalik, "The digital communication tools and citizens' relationship with local governments: a comparison of Georgian and Polish cities," *International Review of Administrative Sciences*, vol. 89, no. 2, pp. 555–576, Jun. 2023, doi: 10.1177/00208523221079746.
- [4] P. Richardson, "Participatory Video (remote, online): Participatory research methods for sustainability - toolkit #2," *GAIA - Ecological Perspectives for Science and Society*, vol. 31, no. 2, pp. 82–84, Jul. 2022, doi: 10.14512/gaia.31.2.4.
- [5] M. Nawrath *et al.*, "Using participatory video in environmental research," *People and Nature*, vol. 6, no. 4, pp. 1382–1393, Aug. 2024, doi: 10.1002/pan3.10646.
- [6] D. M. Argaw, F. C. Heilbron, J. Y. Lee, M. Woodson, and I. S. Kweon, "The Anatomy of Video Editing: A Dataset and Benchmark Suite for AI-Assisted Video Editing," in *Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*, vol. 13668 LNCS, 2022, pp. 201–218. doi: 10.1007/978-3-031-20074-8_12.
- [7] Y. Li, H. Xu, F. Cai, and F. Tian, "Improving AI-assisted video editing: Optimized footage analysis through multi-task learning," *Neurocomputing*, vol. 609, p. 128485, Dec. 2024, doi: 10.1016/j.neucom.2024.128485.
- [8] C. Orak and Z. Turan, "Using artificial intelligence in digital video production: A systematic review study," *Journal of Educational Technology and Online Learning*, vol. 7, no. 3, pp. 286–307, Sep. 2024, doi: 10.31681/jetol.1459434.
- [9] J. Mitchell *et al.*, "Understanding the Potential of a Short-Term Participatory Video Project for Long-Term Change," *J Particip Res Methods*, vol. 6, no. 1, Mar. 2025, doi: 10.35844/001c.128256.
- [10] M. L. Quinton, G. Tidmarsh, B. J. Parry, and J. Cumming, "A Kirkpatrick Model Process Evaluation of Reactions and Learning from My Strengths Training for Life™," *Int J Environ Res Public Health*, vol. 19, no. 18, p. 11320, Sep. 2022, doi: 10.3390/ijerph191811320.