

COMPUTER-BASED MULTIMEDIA USAGE TRAINING

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Abstract

This community service with the title "Training on the Use of Computer-Based Multimedia" aims to improve people's digital literacy and multimedia skills in the fast-paced digital era. This program is designed to teach participants how to integrate various forms of digital media such as text, images, video, and audio in their work and daily lives. This training involves a series of modules that include an introduction to multimedia, technical training, practical applications, and evaluation. Through a combination of face-to-face and online learning methods, this program has succeeded in reaching participants from various backgrounds, including teachers, MSMEs and the general public. Evaluation results showed significant improvements in participants' skills and confidence in managing multimedia content. More than 85% of participants reported substantial improvements in their ability to implement multimedia technology in their professional and personal practices. This service not only provides technical skills but also encourages innovation and technological adaptation in various aspects of life. Suggestions for future research include expanding the scope of training with the latest technology, improving infrastructure, and creating a wider collaboration network with the technology industry. This program provides a model that can be adapted and applied in various other societal contexts to increase the accessibility and effectiveness of digital education.

Keywords: digital literacy, multimedia, computer-based education, technological innovation, media integration.

INTRODUCTION

With the development of multimedia, it opens up opportunities for people to make their daily activities easier, such as communicating with other people, interaction, work and entertainment [1]. The development of information technology, especially in the world of education[2], currently has the potential to create a system transformation. Education is a form of effort to prepare students through guidance, teaching and/or training activities for their role in the future and must be the center of technological progress. The use of learning media in the teaching and learning process also shows that the teacher has planned in carrying out teaching.

Training in the use of computer-based multimedia has a positive effect on the training participants' abilities, both in understanding the concepts and principles of

computer-based multimedia, as well as in using multimedia software to create computer-based learning media. Teachers' use of multimedia in teaching is a planned approach that enhances learning outcomes. It positively impacts participants' understanding of concepts and their ability to create computer-based learning materials[3].

Multimedia provides diverse content sources beyond traditional textbooks. It facilitates efficient absorption of information by students[4]. Multimedia also provides educators with the opportunity to develop learning techniques so as to produce maximum results. Likewise for students, with multimedia, it is hoped that it will be easier for them to determine with what and how students can absorb information quickly and efficiently. Information sources do not focus on text from books but rather on information obtained more widely. The increasingly better and developing capabilities of multimedia technology will make it easier for students to acquire knowledge[5].

With workshops/training, it is hoped that teachers will be able to apply and apply theories and concepts regarding the ability to use interactive multimedia-based learning media. The target group for training in the use of computer-based multimedia can be divided into two, namely:

- Internal target groups, namely target groups that come from the internal environment of the organization or institution, such as teachers, lecturers, teaching staff, employees, and so on.
- External target groups, namely target groups that come from the external environment of an organization or institution, such as the general public, students, college students, and so on.

Partner Problems

Limited Technological Infrastructure: One of the biggest challenges faced by several partners is the limited technological infrastructure sufficient to support the implementation of computer-based multimedia training. This includes a lack of appropriate hardware, such as a computer or mobile device that supports multimedia applications, as well as a stable and fast internet connection.

Instructor Readiness and Capability: Instructors at several partner institutions are often not fully ready or able to integrate multimedia technology in learning. These limitations include aspects such as technical expertise, understanding of multimedia instructional design, and the ability to modify training content to suit digital platforms.

Benefits and Urgency (Priority) of Community Service

1. **Improve Digital Skills:** In the digital era, multimedia skills are an important asset. This training equips participants with the ability to use various types of media,

including text, audio, video and graphics, which are increasingly relevant in professional work and everyday life.

2. **Facilitates Effective Learning:** Multimedia enriches the learning experience by providing more engaging and interactive content. This improves understanding and retention of information, and motivates participants to be actively involved in the learning process.
3. **Increase Productivity:** Effective use of multimedia can increase efficiency and productivity, both in the education sector, by making it easier to present and process complex information.

Purpose of Community Service

The aim of training in the use of computer-based multimedia is to improve the skills and knowledge of training participants in using computer-based multimedia for learning purposes. Specifically, the objectives of this training are as follows:

- Increase training participants' understanding of the concepts and principles of computer-based multimedia.
- Improve training participants' skills in using multimedia software.
- Improve the skills of training participants in creating computer-based learning media.
- Increase the ability of training participants to apply computer-based multimedia in learning.

Training on the use of computer-based multimedia can be aimed at various groups, from teachers, students, to other educational staff. This training can be organized by various parties, such as the government, educational institutions, or professional organizations.

RESEARCH METHOD

To achieve the stated goals, this community service activity is carried out using the following two methods:

a. **Time and Location of Community Service**

This training on the use of computer-based multimedia was carried out at the Artificial Intelligence Laboratory, Faculty of Communication and Information Technology, National University, on Thursday, October 5 2023.

b. **Tools and Materials for Community Service**

Computer-based multimedia training tools and software are the means used to support the implementation of training. These tools and software can be:

Tool

- Computer
- Projector
- Screen

- Sound system
- Computer-based learning media

Software

- Multimedia software
- Presentation software

Multimedia software is software used to create, edit and display multimedia content. Some multimedia software used for training is Adobe Photoshop. Presentation software is software used to create and display presentations. Some popular presentation software is Microsoft PowerPoint.

c. How PKM Implementation Works

The workings of implementing training on the use of computer-based multimedia can generally be divided into several stages, namely:

1. Preparation

The preparatory stage includes:

- Formulation of training objectives
- Development of training materials
- Determining training methods and media
- Training instructor
- Preparation of training facilities and infrastructure

2. Implementation

The implementation stage includes:

- Delivery of training materials
- Practice creating computer-based learning media
- Evaluation of training

The following is a further explanation regarding each stage:

Preparation phase

The preparation stage is a very important initial stage in implementing training. At this stage, it is necessary to formulate clear and measurable training objectives. The objectives of this training will be a reference in developing training materials, methods and media.

Apart from that, it is also necessary to develop training materials that are appropriate to the training objectives. Training materials can include theory and practice. Theoretical material can be delivered through lectures, discussions or presentations. Practical material can be delivered through tutorials.

The choice of training methods and media also needs to be done carefully. The right training method will help training participants to understand the training material better. The right training media will support the success of the training method.

The selection of training instructors also needs to be done carefully. Training instructors must have adequate knowledge and skills in the field of computer-based multimedia.

Preparing training facilities and infrastructure also needs to be done well. Adequate facilities and infrastructure will support the smooth implementation of training.

Implementation stage

The implementation stage is the core stage of training. At this stage, training participants will receive training materials and practice creating computer-based learning media.

Delivery of training material can be done through lectures, discussions and presentations. The practice of creating computer-based learning media can be done individually.

Implementation Method

Methods for implementing computer-based multimedia training are the methods used to deliver training material and provide learning experiences to training participants. The right training method will help training participants to understand the training material better and achieve training objectives.

The following are commonly used methods for implementing training on the use of computer-based multimedia:

- Lectures
Lectures are the most commonly used training method. In this method, the instructor delivers training material orally to the training participants.
- Discussion
Discussion is a training method that involves interaction between the instructor and the trainees. In this method, training participants can exchange thoughts and opinions regarding the training material.
- Presentation
Presentation is a training method that uses visual media to convey training material. Visual media that can be used include images, videos, animations and graphics.
- Tutorials
Tutorial is a training method that provides guidance to training participants in creating computer-based learning media. In this method, the instructor will provide clear and structured steps to the training participants.

RESULT AND DISCUSSION

The implementation stages used to carry out PKM activities for the 2022/2023 Even Semester academic year are:

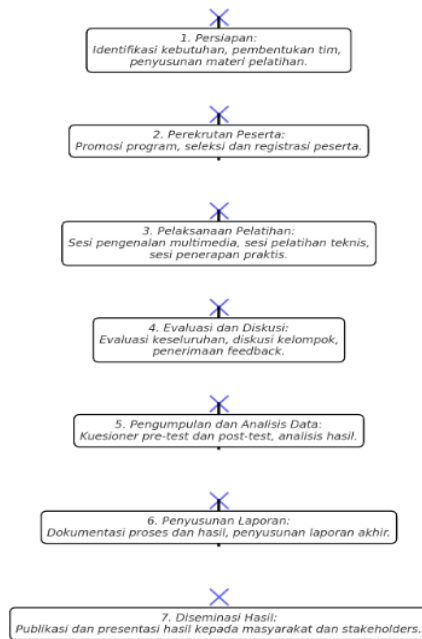


Figure 1. Logical flow of community service activities

The flow diagram above illustrates the stages of implementing community service with the title "Training on the Use of Computer-Based Multimedia". Each stage is explained in detail:

1. Identification of Community Needs and Recruitment of Participants: Understand the specific needs of the community and recruit participants who will take part in training.
2. Development of Training Materials and Logistics Preparation: Create relevant training materials and prepare all logistics required for the implementation of the training.
3. Implementation of Computer Based Multimedia Training: Conduct training sessions that include the introduction and use of multimedia tools.
4. Practical Applications and Case Studies by Participants: Participants apply skills learned through practical projects or case studies.
5. Evaluation and Feedback from Participants: Collect feedback from participants to assess training effectiveness and make improvements.
6. Data Analysis and Training Effectiveness Assessment: Analyze the data collected to assess the impact of training on improving participants' skills.
7. Reporting and Dissemination of Results to the Community: Prepare reports on the implementation and results of training and disseminate this information to the wider community.

This diagram shows the logical flow of service activities from preparation to dissemination of results, illustrating a systematic framework for training implementation and evaluation.



Figure 2. Implementation of Training

CONCLUSION

The community service program "Training on the Use of Computer-Based Multimedia" has been successfully implemented with active participation from various elements of society. This training has proven effective in improving participants' digital literacy and multimedia skills, which include the ability to manage digital content, integrate various media on one platform, and apply these skills in professional and personal contexts.

Trainees demonstrated significant improvements in technical and creative abilities, as measured through various evaluation methods, including pre-test and post-test, as well as project evaluation. This indicates that the integration of multimedia technologies in learning and daily work not only increases efficiency but also facilitates more innovative and adaptive approaches to problems and tasks.

Suggestion

Based on the results and experience gained from implementing this program, several suggestions for developing similar programs in the future are as follows:

1. **Improved Access and Infrastructure:** To increase the reach and impact of training, it is recommended that future programs consider the use of better infrastructure and more advanced technology. This includes ensuring the availability of adequate equipment for all participants and optimizing online learning platforms to facilitate access from remote locations.
2. **More Diverse Curriculum:** Integrate more topics and skills in the training curriculum, such as cybersecurity, web programming, and graphic design, to provide participants with knowledge that is more comprehensive and relevant to today's job market needs.

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