

# SUNSHINE RECORDER CAMBLE STOKES MEDIA TRAINING BASED ON FIELD CASE METHOD ON ATMOSPHERIC MATERIAL FOR MGMP GEOGRAPHY SMA/MA TEACHERS BUKITTINGGI CITY

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**ABSTRACT:** This article aims to improve teachers' skills in developing Campbell Stokes' Sunshine Recorder interactive media and improve teachers' understanding of pedagogical aspects in lesson planning and learning media. This activity was carried out in the Meeting Room of SMAN 1 Bukittinggi City using training, question and answer, and practice methods. The participants of this activity were high school Geography subject teachers in Bukittinggi City. This activity includes training on designing effective learning media and also providing training on developing interactive learning media on the topic of Atmosphere for high school geography teachers in Bukittinggi City. The training with Geography subject teachers aims to improve teacher skills in developing Atmospheric learning media through Campbell Stokes' Sunshine Recorder media. Through this training, teachers experienced an increased understanding of pedagogical aspects, especially in understanding and developing learning media, especially in Sunshine Recorder Campbell Stokes media. Geography teachers also better understood the competencies to design and use media effectively to create quality, efficient, and interactive learning experiences.

*Keywords: Lesson Plan, Atmosphere, Campbell Stokes Sunshine Recorder Media*

## 1. INTRODUCTION

Learning requires several components to be met, one of which is using learning media, which plays a vital role in supporting the teaching and learning process (PBM). The selection of the right media is highly recommended so that creativity in the teaching and learning process can be improved [1]. Therefore, the importance of media utilization in education must be considered an integral element in the learning process. Media in education includes all communication tools that can be used to convey messages/information from a source to students to stimulate students' thoughts, feelings, interests, and attention during learning activities [2]. Media is an intermediary between the sender of information, which functions as a source or resource, and the recipient of information [3]. The definition of learning media is a learning resource

component that contains teaching materials in the student environment that can motivate students to learn [4]. In summary, learning media is a tool used to convey or distribute teaching material [5].

Media utilization should be an essential part of the learning process. Santoso S. Hamijaya, in Rohani (1977), states that media are all intermediaries used by people who spread ideas so that ideas or ideas reach the recipient. The definition of learning media is a combination of materials and tools or a combination of software and hardware (Sadiman et al., 1996: 5). The existence of learning media is now a connecting tool between a teacher and students so that the teacher acts as a facilitator. In addition to being a conveying or delivery system, the media is often replaced with the word mediator, with the term media mediator indicating its function or role, namely regulating the effective relationship between the two main parties in the

learning process, students and lesson content. In summary, media is a tool that conveys or delivers teaching messages (Arsyad, 2010: 3). Beny A Pribadi (2017) states that media is used to support learning activities to acquire knowledge, skills, and attitudes.

Learning media can bridge the problems of the limited absorption of students and teachers' ability to manage learning in the classroom. Making learning media for some educators may not be easy, including in geography learning for SMA / MA level. Geography is a science that studies the similarities and differences in geospheric phenomena with a regional and environmental perspective in a spatial context (Results of seminars and workshops in Semarang in 1988). Learning geography is not only limited to reading material but also remembering and understanding what has been learned so that students can develop an understanding of concepts, principles, and scientific process skills.

Geography subjects are closely related to spatial, so it is necessary to make direct practice to simplify abstract concepts. So that students can more easily understand the material and be drawn directly into their minds. Learning media is necessary to stimulate students' thoughts, feelings, attention, interest, and motivation so that the teaching and learning process can run well and smoothly.

Nana Sudjana and Ahmad Rivai (2002: 2) suggest the benefits of learning media in students' learning process, namely.:

1. Learning will be more interesting for students to foster learning motivation.
2. Learning materials will be clearer in meaning so that they can be better understood by students, enabling them to master and achieve learning objectives.
3. Teaching methods will be more varied, not merely verbal communication through the utterance of words by the teacher so that students are not bored and the teacher does not run out of energy, primarily if the teacher teaches at every learning hour.
4. Learners can do more learning activities because they listen to the teacher's description and other activities such as observing, doing, demonstrating, showing off, etc.

The utilization of learning media can overcome the obstacles that arise due to the limited understanding of students and the ability of teachers to manage the learning process in the classroom. The proper utilization of learning media is essential in the learning process because the media has various advantages, such as making abstract and complex concepts into something concrete,

simple, systematic, and straightforward. For some educators, creating learning media can be a complex task, especially in the context of geography education at the high school level. Learning media includes everything that can be used to convey messages from sender to receiver, stimulating students' thoughts, feelings, attention, and interests so that the learning process can take place [9].

The benefits of learning media in the student learning process are as follows:

1. Learning becomes more interesting, thus fostering student motivation.
2. Learning materials become clearer in meaning, making it easier for students to understand and enabling them to achieve learning objectives.
3. Learning methods become more varied, not only relying on verbal communication through teacher lectures, preventing student boredom and reducing teacher fatigue, primarily when the teacher teaches several lessons.
4. Students can engage in more learning activities as they listen to the teacher's explanation and participate in other activities such as observing, demonstrating, presenting, and many more. [10]

Geography is a discipline that studies the entire contents of the earth and the changes that occur in it. Geography learning is not just about memorizing a list of place names, geographical features, countries, and their capitals [11]. Geography education is expected to provide opportunities for students to understand the environment and related processes and to equip them with life skills that can be applied in various natural conditions. The general objective of geography education is to develop students who have the ability, attitude, and skills to develop analytical thinking skills in understanding geospheric phenomena, foster a sense of love for the country, appreciate the existence of other countries, and be able to overcome problems that arise due to interactions between humans and their environment [12]. Studying geography is limited to reading the subject matter and memorizing and understanding the material studied in depth. This aims to foster students' understanding of scientific concepts, principles, and processes.

In learning geography, the relationship with the spatial dimension is very close, so making visual representations in two and three dimensions is essential to simplify abstract concepts. This is done so that students understand the material and have a clear picture.

Various types of learning media are necessary because they can stimulate students' thoughts, emotions, attention, interests, and learning motivation, improving the smoothness and effectiveness of the teaching and learning process.

Based on field observations carried out by the service team and students with the Head of MGMP Geography SMA / MA Bukittinggi City, Mrs. Efi Yanti, S. Pd., who is also a geography teacher at SMAN 3 Bukittinggi City (Tuesday, 05/3/2024), it was found that geography teachers face obstacles in understanding atmospheric material. According to her, teachers generally struggle to understand atmospheric material for reasons.:

1. Geography teachers lack mastery of the material.

Teachers still experience problems in understanding and delivering atmospheric material, where among the 9 sub-materials the teacher only mastered 5-6 materials.

2. New material.

Atmospheric material is new material for students, especially the use of Campbell Stokes' Sunshine Recorder tool, because this material has not existed at the upper secondary education level before so that in atmospheric material the use of Campbell Stokes' Sunshine Recorder tool is a fairly new media.

Students have no shadow or imagination in using the tool, so that in delivering the teacher requires facilities and infrastructure as props in the form of audio and visual. Not only that, atmospheric material, especially the use of Campbell Stokes' Sunshine Recorder tool, causes the learning style of students who are in science to be followed by students who are in social studies. So, teachers must guide students to better understand atmospheric material through the use of Sunshine Recorder Campbell Stokes media.

3. Material related to technology

The components of atmospheric material are very complex and loaded with the use of technology. Broadly speaking, it consists of energy, atmosphere, objects, data acquisition, and data use. What and where one's position is in these components is not yet understood by the teacher. Whether in atmospheric material

one does everything at once, or some of it, or just one of them.

Another obstacle is that it is difficult for teachers to keep up with the rapid development of technology due to age. At the time of carrying out his studies (college) in learning atmospheric material has not been fully studied due to the limited facilities and infrastructure available because at the time of the geography teachers the technology was not as well developed as it is today.

The results of observations that have been made in MGMP Geography SMA / MA Bukittinggi City, there are problems in the teaching and learning process of geography subjects. The problems include the lack of use of learning media in the learning process and the lack of concrete media development that affects the low level of interaction and attention of students to teaching and learning activities, especially when learning atmospheric material. This is due to the lack of teacher skills in using geography learning media on atmospheric material so that the learning process is less interesting. These problems certainly affect the quality of learning with student achievement. Improving the quality of student learning requires an appropriate learning strategy and media, so that it can improve the learning process.

The appropriate learning media on atmospheric material and its impact on life is one of the Campbell Stokes Sunshine Recorder media. This media directly describes the length of solar irradiation in an area as measured by how the tape burns as an indicator that the tool is working. Through this learning media the teacher can explain not only through pictures or videos, but the teacher directly sees how the atmospheric cycle. Learning by using concrete media will be stored for a long time in the memory of the students.

Based on the results of observations and interviews with geography teachers in MGMP Geography SMA / MA Bukittinggi City Mrs. Efi Yanti, S.Pd, there are several problems that occur in geography learning, namely:

1. Lack of availability of learning media in the geography learning process.
2. Lack of atmospheric media development that affects the low level of interaction and attention of students to teaching and learning activities, especially during atmospheric learning and its impact because it is not pictured in the minds of students.

The problems faced by teachers and students will affect the achievement of quality education. Therefore, all parties must collaborate to overcome these problems. In this case, the Community Service Team of the Department of Geography FIS UNP, especially those who focus on education, submitted a Community Partnership Program (PKM) Scheme proposal related to training in the use of learning media.

Of course, these various problems will have an impact on the quality of learning and student achievement. Learning success can only be achieved if students can easily understand the material and actively participate in the learning process. Therefore, the use of appropriate learning approaches and media is necessary to improve the effectiveness of the learning process. Various challenges faced by teachers and students will greatly affect the quality of educational outcomes.

Based on the results of the evaluation of the situation and problems that have been studied with partners, the Community Service Team of

the Department of Geography FIS UNP proposes solutions to overcome these challenges through a series of activities. This solution includes organizing training in the use of learning media in the form of the Sunshine Recorder Campbell Stokes tool to improve the development of Geography learning media skills, as well as training to improve mastery of methods and use of learning media on atmospheric material using the Sunshine Recorder Camble Stokes tool.

## 2. METHODS

Community Service Activities Department of Geography FIS UNP implemented in MGMP Geography SMA / MA in Bukittinggi City. The participants involved in this community service activity were 15 teachers of MGMP Geography SMA/MA Bukittinggi City. The activity implementation plan can be seen in Table 1 below:

Table 1. Activity Implementation Plan

Nu	Activities	Activity Type	Description
1	I	Increased knowledge of effective learning media design	The resource person provides material and then provides assignments with a format of 25% theory and 75% assignments.
2	II	Training on the use of learning media, namely Campbell Stokes' Sunshine Recorder tool on atmospheric material	The resource person provides material and then provides assignments with a format of 25% theory and 75% practice related to the learning media Sunshine Recorder Campbell Stokes tool on atmospheric mathematics. Each teacher uses learning media according to the specified KD

## 3. RESEARCH RESULTS

The Campbell Stokes Sunshine Recorder Media Training based on Field Case Method on Atmospheric material for MGMP Geography SMA / MA Bukittinggi City teachers was held on Saturday, September 7, 2024 at 08.00 - 16.00 WIB in the Meeting Room of SMAN 1 Bukit Tinggi City. In the training, Sari Nova, S.Pd, M.Sc, and members Dr. Deded Chandra, S.Si, M.Si, Sri Mariya, S.Pd, M.Pd, and accompanied by Dr. Helfia Edial, M. T., Mentari Dian Pertiwi, S. Pd, M. Pd, Sri Kandi Putri, S. Si, M. Sc,

Photos of the activities are shown below:

Affandri Putri, S. Si, M. Sc., Affandri Jasrio S. Pd., M. Pd., and Student Team M. Fhadil Alfharizi, Regi Cania, Alfin Oktary, Aldi Rahman, M. Alwi Husein, M. Ilham Endriadi, Bambang Afriadi Putra, Rio Saputra Wijaya, Amor S. Andriaan, Debi Arif Budiman, Nickola Saputra, Zaki Mubarok, and Ahmad Badri.

This training was attended by all high school MGMP geography teachers in Bukittinggi City. Accompanied by a team of geography department students who gave directions in training the use of Sunshine Recorder Campbell Stokes media on Atmospheric material.



Figure 2. Opening of training on the use of Sunshine Recorder Campbell Stokes media Atmosphere MGMP Geography SMA / MA Bukittinggi City



Figure 3. Explanation of the material on how to use Sunshine Recorder Campbell Stokes media Atmosphere MGMP Geography SMA / MA Bukittinggi City



Figure 4. Outdoor activities using Sunshine Recorder Campbell Stokes media Atmosphere MGMP Geography SMA / MA Bukittinggi City



Figure 5. Closing Training on the use of Sunshine Recorder Campbell Stokes media Atmosphere MGMP Geography SMA / MA Bukittinggi City

The implementation of community service activities with the title Training on the Use of Sunshine Recorder Campbell Stokes Media based on Field Case Method on Atmospheric Material for MGMP Geography Teachers SMA / MA Bukittinggi City as one of the geography learning media is based on the service team's awareness of the importance of helping teachers to really have knowledge about mastery, development and use of effective learning media in the learning process so that learning is more interesting and can be easily understood by students. Teachers will find it easy to explain lessons when assisted by interesting media and can be directly practiced in the field with students. Students will also easily record and draw in their memories about material related to the Atmosphere.

The service team realizes that no matter how sophisticated and modern life is with technological support, it will not be able to take care of the role and function of teachers in the classroom. Teachers who are liked by students are teachers who are not monotonous when teaching, for this effort, teachers in learning use varied media that can support the learning process. Teachers are also expected to be able to utilize various learning media so that the learning process is not monotonous, and is expected to involve student activeness during the learning process.

This community service was carried out at SMAN 1 Bukittinggi using UNP PNPB 2024 funds which in general has been carried out very well. In its implementation, 15 teachers were very enthusiastic and happy with the existence of training like this. There are several important notes from the implementation of this service that need to be the attention of various parties.

1. Teachers feel great benefits from this service. This was revealed from the service team's interview with the training participants. Based on this interview, one of the teachers hopes to carry out more activities like that and become a new experience for teachers on tools or media that can be practiced in geography learning, especially in Atmospheric material because learning support media is still lacking and limited in high schools in Bukittinggi, thus provoking a question from one of the teachers to ask about the price of the Campbell Stokes Sunshine Recorder tool that can be sought to be held in geography learning at school. In addition, from the interview with the head of MGMP Geography Bukittinggi City, Mrs. Efi Yanti S. Pd., this activity is very good and hopes that students can also attend and see

and be directly involved and practice the use of these tools. Therefore, the geography department represented by Mr. Dr. Deded Candra S. Si, M. Si proposed that next year a similar activity will be held by bringing representatives from the students of each school.

2. Teachers were very enthusiastic about participating in this training because they had never used Campbell Stokes' Sunshine Recorder media tool that could help the learning process. Teachers are also very enthusiastic about practicing the use of the tool, so that teachers can understand how to use the Sunshine Recorder Campbell Stokes media in the learning process on Atmospheric material. The benefits of using the media will be greater than lecture-only learning.

A teacher who has high professionalism will try to make the students he teaches easily understand and understand the material with high creativity to use media that can involve students, so as to encourage them to be active in learning so that they easily understand the material being taught.

#### 4. CONCLUSION

Participants in this training activity consisted of members of the MGMP (Subject Teacher Working Group) of High School Geography in Bukittinggi City, totaling 15 teachers. In line with the objectives of implementing this community service activity, after this activity is completed, it is hoped that the teachers will have better abilities in using Campbell Stokes' Sunshine Recorder media in atmospheric material so as to create quality learning.

This introduction and training activity is expected to provide subject teachers with the provision to continue practicing in developing learning media during the learning process. In addition, teachers are also encouraged to integrate the use of learning media that emphasizes activeness by involving students during the learning process so as to increase students' understanding and knowledge. Thus, it is expected that geography teachers have better competence in designing and implementing effective learning media, thus creating a higher quality learning experience.

## 5. ACKNOWLEDGMENTS

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