Development of Applied Science and English Learning Media at Kembangsari Elementary School

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Abstract. This community service was carried out in Munggur Hamlet, Srimartani, Piyungan, Bantul, which is 22 KM from the UMY campus, with SD Kembangsari partners. Along with the rapid development of technology and the construction of public facilities which are increasing and adopting high technology, it is necessary to develop learning media also up to elementary schools without leaving the basic knowledge that must be mastered by elementary school children. In the context of delivering teaching materials, the preparation that needs to be done is to create learning content that pays attention to pedagogic aspects. Teachers need basic multimedia skills so that teaching materials delivered through various media can be optimized so that they are more compact, communicative and systematically arranged according to the administration of lesson plans. The first problem faced by partners is learning materials and media that have not been updated for a long time following technological developments in science subjects, especially in the subject of Electricity, Magnets, Electromagnets and the Solar System. Then, the second problem is that educators are unable to maximize the creation of learning media and effective ways/methods to teach English in English subjects to students. This community service aims to carry out activities that involve teachers and students by offering solutions in developing learning materials, procuring practicum tools and delivering material to students. Implementation of activities using discussion, training and mentoring methods as well as procuring practicum tools so that teachers and students gain insight into technological developments and the delivery of appropriate learning to students. Additionally, it also aims at making information media regarding subject matter both Science and English into Banner Stands so that they can be placed in corners of the Classroom and or in front of the class which makes it easier for students to see, read and memorize the contents of the material at any time.

Keywords: elementary school, english learning, teachers

1 Introduction

The development of interesting, innovative and inspiring learning media is needed to assist the learning process in order to improve student learning outcomes. Conventional learning is teacher oriented, meaning that teachers tend to provide as much information as possible to students, while students only listen, take notes, make material summaries, then work on questions [1]. The classroom atmosphere with conventional methods plus the
absence of supporting media will tend to be boring and affect student activity [2]. In fact, according to Permendikbud No.103 of 2014 and Permendikbud No.16 of 2007, teachers are required to be creative and innovative in holding interactive, inspiring, fun learning, and motivating students to participate actively. One of the efforts to create interesting and fun learning is that teachers can use the media as a vehicle for conveying information or learning messages that are expected to help teachers improve students' understanding of learning [3]. The use of media can make the learning process clearer, interesting, and interactive and can foster students' positive attitudes towards the material and the learning process [4]. Games can be used as learning support media which have positive aspects, namely students feel relaxed in learning and can understand concepts through the games they play [5]. [6] added that the advantage of game media is that it allows active participation from students to learn so that it will make students feel happy and more motivated to study harder.

1.1. Situation Analysis

This community service was carried out in Munggur Hamlet, Srimartani, Piyungan, Bantul, which is 22 KM from the UMY campus, with SD Kembangsari partners. Munggur is one of the 17 hamlets in Srimartani Village, which is located in the eastern part of Piyungan District, Bantul Regency. Hamlet data in the Srimartani Village area, namely:

1. Mandungan
2. Piyungan
3. Piyungan Post
4. Wanujoyo Lor
5. Wanujoyo Kidul
6. Munggur
7. Mutihan
8. Daraman
9. Kwasen
10. Mojosari
11. Kembangsari
12. Petir
13. Sanansari
14. Bulusari
15. Rejosari
16. Kemloko
17. Umbulsari

Based on the 2018 Srimartani Village Monograph Book, 46.8% of the area in Srimartani Village is paddy fields, around 29.2% is residential land, 15.36% forest and dry land, and 8.6% plantation land. Srimartani Village consists of 17 hamlets and is occupied by approximately 3,662 households (heads of families). Srimartani Village has a population aged 0-15 years of 25%, 15-65 years of 69%, and ages over 65 years of 6.5%. The number of poor people in this hamlet is based on the BPJS standard of 25.2%. Due to the monograph of the hamlet where most of the area is rice fields, most of the main livelihoods of the residents of Srimartani Village are farmers who work on the rice fields from morning to evening.

Number of Elementary Schools (SD) In Srimartani Village there are 6 SD, namely:

1. SDN 2 Petir
2. SDN 1 Petir
3. Kembangsari Elementary School
4. SDN Mandungan
5. SDN Sanansari
6. Mojosari Elementary School
1.2. Problems

In this community service program, partnership was conducted with SDN Kembangsari. However, the problems faced by several elementary schools in this village were almost the same, so the success of the program is expected to be able to provide solutions to partner elementary schools and be emulated by other schools. The first problem faced by partners was learning materials and media that had not been updated for a long time following technological developments in science subjects, especially in the subject of Electricity, Magnets, Electromagnets and the Solar System. And the second problem was that educators were not able to maximize the creation of learning media and effective ways/methods to teach English in English subjects to students.

2 Methodology

Implementation of activities used were discussion, training and mentoring methods as well as procuring practicum tools so that teachers and students gain insight into technological developments and the delivery of appropriate learning to students.

In its implementation, the community service was divided into several stages. Starting with coordinating with the school principal, homeroom teacher and head of the school committee where in this activity it was agreed that the community service program would be carried out. After a mutual agreement regarding the implementation of the service program, socialization was carried out to the Principal as well as teachers and students who were the target of the service program. Local residents who wanted to know about this service program were also involved. After in-depth discussions with all teachers and school employees, the research team formulated the problems faced by this school and provided solutions. The next stage was the procurement of tools and materials for electricity, magnets and electromagnets as well as English practicum. In procuring this tool, service program members were tasked with determining the type, type and specifications of the tools needed to suit their needs. Then, the procurement of this tool was assisted by student members as their duties in this service program were to help procure the necessary materials and tools. Furthermore, counseling, training and assistance were carried out for homeroom teachers at this school to make good and up-to-date learning media, including training on tool specifications, tool use, how to assemble, maintain and repair this by the chairperson and collaborator lecturers in this service program.

The method used to measure the success of this community service program was the completeness of the tools and materials used for practicum, good learning media and student understanding before and after the program was implemented. Furthermore, it included making information media regarding subject matter both Science and English into Banner Stands so that they could be placed in corners of the Classroom and or in front of the class which made it easier for students to see, read and memorize the contents of the material at any time.

3 Results and Discussion

After coordinating and socializing this program, it was continued with the procurement of tools and materials for Electricity, Magnets and Electromagnets practicum as well as English. In the electric circuit practicum, an electric circuit KIT was given where this tool could help students understand the principles of electricity and circuits in electricity more easily. The following is a picture of the electrical circuit practicum kit presented in Figure 1.
Furthermore, counseling, training and assistance was carried out for homeroom teachers at this school to make good and up-to-date learning media, including training on tool specifications, tool use, how to assemble, maintain and repair.

Submission of interesting science and English practicum material is presented in the following figure.
Figure 3. English lesson by games

4 Conclusions

This activity has been carried out smoothly where this activity has involved teachers and students by offering solutions in developing learning materials, procuring practicum tools and delivering material to students.

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References


