




Empowerment knowledge of elementary school teachers for supporting green schools

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ARTICLE INFO	ABSTRACT
<p>Article history Received: 2023-01-17 Revised: 2023-01-31 Accepted: 2023-02-01 Published: 2023-02-27</p> <p>Keywords Attitude Green Schools Environment Knowledge Teachers</p>	<p><i>Environmental problems including in this case environmental pollution need to be overcome in various ways. Schools as educational institutions need to be examples and role models for the development of environmental-based schools or green schools. The problems that occurred in one of the schools, namely SDS Darul Amal Jampangkulon Sukabumi West Java showed that information related to green schools was still very minimal. The purpose of this activity is to overcome the problem of the low knowledge of elementary school teachers related to efforts to establish green schools. The implementation method used in this activity is through online seminars using a teleconference application. The results of this community service activity indicate that the knowledge score and teacher attitudes have increased related to green school. The average knowledge score at the beginning was 24.79 and increased to 32.62 and teacher attitudes increased from 82.92 to 86.67 for the topic of green school. Green school activities that can be applied in future activities are to familiarize students with being able to sort waste.</i></p>
<p>Kata Kunci Green Schools Guru Lingkungan Pengetahuan Sikap</p>	<p>Pemberdayaan pengetahuan guru SD untuk mendukung upaya terciptanya green schools. Permasalahan lingkungan hidup termasuk dalam hal ini pencemaran lingkungan perlu diatasi dengan berbagai cara. Sekolah sebagai sebuah institusi Pendidikan perlu menjadi contoh dan <i>role model</i> untuk pengembangan sekolah berbasis lingkungan atau <i>green school</i>. Permasalahan yang terjadi di salah satu sekolah yaitu SDS Darul Amal Jampangkulon Sukabumi Jawa Barat menunjukkan bahwa informasi terkait dengan <i>green school</i> masih sangat sedikit. Tujuan dari kegiatan ini adalah untuk mengatasi masalah rendahnya pengetahuan guru SD terkait dengan upaya pembentukan <i>green school</i>. Metode pelaksanaan yang digunakan dalam kegiatan ini adalah melalui seminar secara daring menggunakan aplikasi <i>teleconference</i>. Hasil dari kegiatan pengabdian kepada masyarakat ini menunjukkan bahwa skor pengetahuan dan sikap guru mengalami peningkatan terkait dengan <i>green school</i>. Rata-rata skor pengetahuan pada awalnya adalah sebesar 24.79 dan mengalami peningkatan menjadi 32.62 dan untuk sikap guru mengalami peningkatan dari 82.92 menjadi 86.67 untuk topik <i>green school</i>. Kegiatan <i>green school</i> yang bisa diterapkan dalam kegiatan kedepannya adalah dengan membiasakan siswa untuk bisa melakukan pemilahan sampah.</p> <p style="text-align: right;">Copyright © 2023, Ichsan et al This is an open access article under the CC-BY-SA</p> 

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INTRODUCTION

Environmental education is a subject that fits the needs of sustainable development. Schools that have a green school concept in this case are very appropriate and contextual with the needs of sustainable development that must be carried out by the government and environmental organizations. Environmental education needs to be disseminated to all school members to make it easier to achieve green schools (Shay-Margalit & Rubin, 2017; Zhang et al., 2022). Teachers have an important role in implementing green schools in rural and urban areas. Schools located in rural and urban areas need to get relatively the same topic related to green schools. Even schools in rural areas do not necessarily implement the green

school program. This is because green school is not only related to green land but also related to the behavior of students and teachers in dealing with environmental problems. Green school, one of which is a program that has not been implemented at SDS Darul Amal Jampang Kulon Sukabumi so the community service team of FKIP UMHT provides implementation and information regarding the green school program in a good and clear manner.

A green school is a green school, but not only the physical appearance of the school that is green or shady but the form of a school that has educational programs and activities that lead to awareness and wisdom towards the environment (Cheng & So, 2015; Robina-Ramírez & Cotano-Olivera, 2020; Sucipto & Safitri, 2019). Green school is a school that has a commitment and systematically develops certain programs to internalize environmental values into all school activities. The physical appearance of the school is arranged ecologically so that it becomes a vehicle for learning for all school members to be wise and have environmentally friendly behavior. SDS Darul Amal as an educational institution requires more in-depth socialization related to forming a green school.

The problem faced by SDS Darul Amal is related to the limited information obtained by teachers regarding green schools. This minimal information needs to be developed by the teacher so that it can be conveyed to students. The information shared can be related to the basic concept of green school, green school supporting facilities, constraints related to green school, and development strategies for realizing green school. In general, SDS Darul Amal is located in a green area with a large area of land, so it is very possible to plant trees. The problems faced by this school are related to the behavior of students who still do not show efforts to preserve the environment more regularly. This resulted in efforts to improve the environment to be an urgent matter to be socialized to SDS Darul Amal school residents.

Empowering the knowledge of elementary school teachers in this case is something that can be done to preserve the environment and lead to the realization of a green school. Based on these arguments, it is necessary to carry out an effort to empower knowledge related to green schools for SDS Darul Amal teachers. This is to encourage efforts to form environmentally-minded schools (Goldman et al., 2014; McCullough et al., 2018; Wissinger et al., 2020). Seminar activities in this case can be carried out online or in person. Regarding the effectiveness of the time and location which are classified as far away, seminars that are conducted online can be a solution so that the activities carried out can run effectively and without problems. Based on this description, the purpose of this activity is to empower SDS Darul Amal teachers' knowledge to be able to contribute to the development of green schools. The purpose of this activity is following the objectives of the Sustainable Development Goals (SDGs), namely climate action to prevent the adverse effects of climate change.

METHOD

This community service activity is carried out online using the help of the Zoom teleconference application. The implementation location for this activity is in Jampangkulon Sukabumi, West Java. Participants in this activity were teachers from SDS Darul Amal Jampangkulon. The implementation of this activity was held on August 2022. The topics discussed in this activity are related to green schools and efforts to create schools that are based on the environment. The technical implementation of the activities can be seen in the Figure 1.

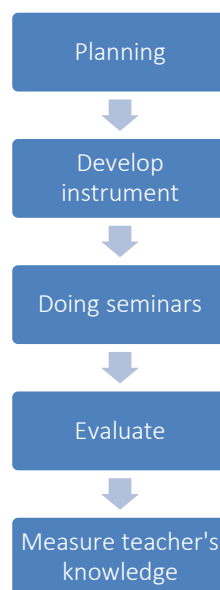


Figure 1. Flow chart of community service activities that have been carried out

The first stage is related to the planning of activities carried out by involving members of the community service team. This activity begins with planning related to teaching topics that need to be prepared, evaluation instruments for community service activities, then technical implementation. This is important to discuss to carry out community service

activities. The second stage is related to instrument development, namely in the form of developing pre-test and post-test questions which function to measure the increase in teacher knowledge related to green school. After the instrument development is carried out, the next step is to carry out seminar activities which are carried out online using the Zoom teleconference application. This seminar activity was carried out for approximately 2 hours and was carried out by delivering topics and discussing of questions and answers with SDS Darul Amal teachers. Evaluation of activities is carried out by giving post-test questions to teachers as seminar participants. The last step is related to measuring the increase in elementary school teachers' knowledge related to green schools. This activity is said to be successful if there is an increase in the scores of teachers' knowledge and attitudes related to green schools. The instrument used to measure teacher knowledge and attitudes is a questionnaire in the form of a pre-test and post-test.

RESULTS AND DISCUSSION

This community service activity was carried out for elementary school teachers at SDS Darul Amal Jampang Kulon Sukabumi (Figure 2) because remembering these teachers play an important role in providing the basis for students to behave environmentally friendly. This behavior needs to be carried out in everyday life for elementary school-age children, it is very important to have a basis for environmentally friendly behavior because this can take root until the child is an adult, and it is hoped that this behavior will not only occur at school but also at home and wherever the student is. (Gietz & McIntosh, 2014; Lai, 2016; Rahmayanti et al., 2018; Simbolon, 2010). Environmentally friendly behavior including cleanliness is also given a topic related to the 1 student 1 waste program and the importance of greenery both in the school environment and in residential areas where students and teachers live. The preparation stage for the activity is carried out by making a poster for the implementation of the activity.



Figure 2. Poster of community service activities

This community service activity regarding green schools has only reached a few participants, namely 10 teachers at the school, but this can start planning for the implementation of green schools at SDS Darul Amal Jampangkulon Sukabumi so that it is hoped that many students will understand and implement environmentally friendly behavior both at school and at home. The community service activities carried out in general went smoothly without significant obstacles. This shows that community service activities carried out online can run without significant obstacles. Activities that have been carried out in the form of online seminars for seminar participants can be seen in Figure 3.

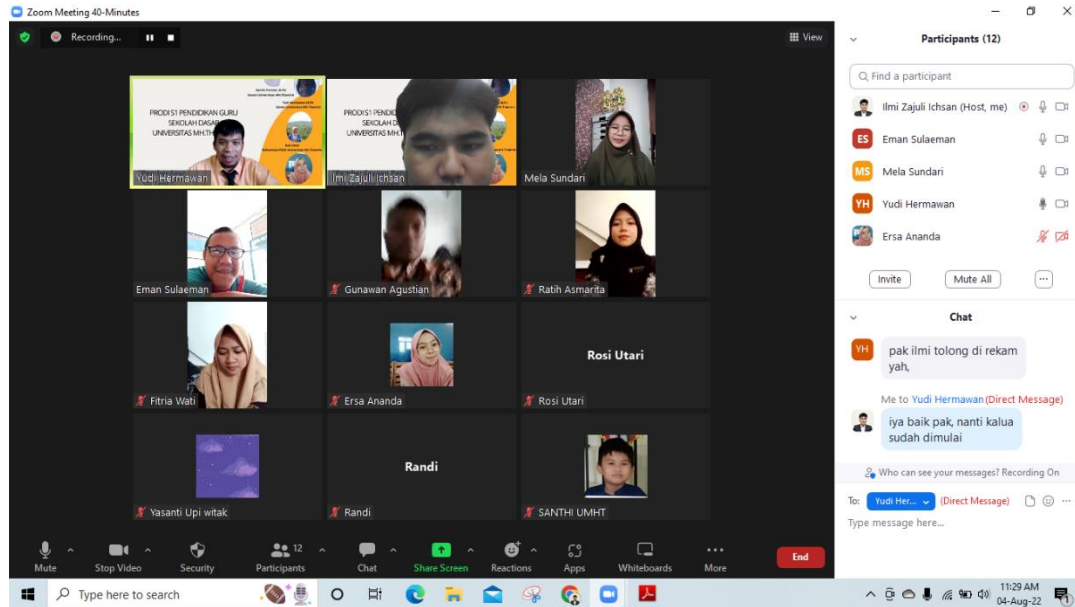


Figure 3. Implementation of community service activities online

Submission of topic about green schools is intended to open participants' insights about the implementation of green schools which can be started simply. Activities carried out do not have to be paid for but can be started with what is already in their respective schools. Then take advantage of the potential that exists on the part of teachers, students, and all other school members by starting from behavior in everyday life. Some examples of environmentally friendly behavior such as arranging existing plants and utilizing and treating all existing facilities and infrastructure with routine activities (Bissinger & Bogner, 2018; Jonell et al., 2016; Kaiser & Wilson, 2004; Seebauer et al., 2017; Truelove & Gillis, 2018). This can be learned by looking at the opportunities, advantages, and constraints in its application in schools.

From the activities carried out it can be observed that the teachers are enthusiastic about participating in this community service activity both in the delivery of topic and in the question and answer session, this can be seen from the many questions about green school. The obstacles faced by teachers at SDS Darul Amal. In Sukabumi, there is limited time to integrate local content related to this green school because the topic is already dense, so through this community service teachers want to try to apply the importance of a green school based on environmentally friendly behavior to all school members. The magnitude of the increase in the elementary school teacher's knowledge score related to green school can be seen in the graph in Figure 4.

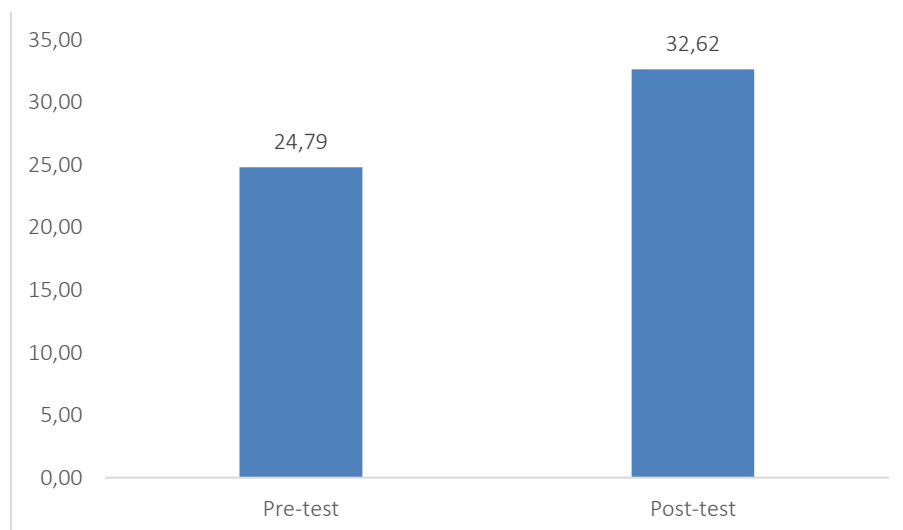


Figure 4. Average pre-test and post-test scores related to teacher knowledge about green school

The results of this activity showed an increase in the knowledge score from 24.79 to 32.62 for elementary school teachers' knowledge related to green school. As for the increase, it shows that the seminar activities took place smoothly and could increase elementary school teachers' knowledge related to green schools. Meanwhile, the attitude scores of elementary school teachers related to green school development efforts can be seen in Figure 5.

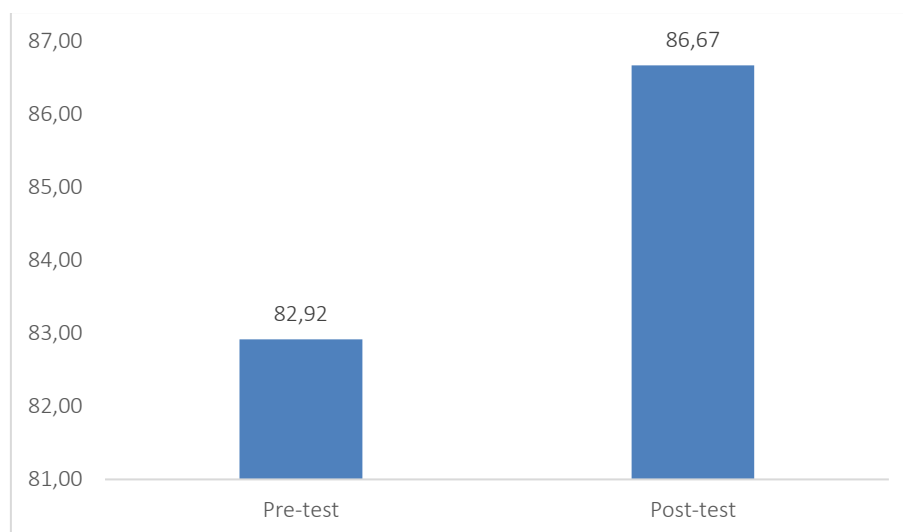


Figure 5. Average pre-test and post-test scores related to teachers' attitudes about green school

The results of this service activity show that seminars can increase the knowledge and attitudes of SDS Darul Amal teachers to form a green school. Teachers in this case must be able to provide examples to students related to various environmentally friendly behaviors in forming a green school. Behaviors such as saving energy by turning off lights when not in use are included in activities that support the green school. In addition, behavior related to using environmentally friendly containers is also a form of implementation of environmentally friendly activities. The formation of a green school needs to be supported by various existing components including students and school principals. Joint efforts to realize environmentally friendly schools need to be carried out to create an environment that is oriented towards sustainable development (Kabadayi & Altinsoy, 2019; Voulvoulis & Burgman, 2019; Zhao et al., 2013).

CONCLUSION

Based on the results of the community service activities that have been carried out, it can be concluded that seminar activities can increase teachers' knowledge and attitudes related to green schools. The recommendation for future community service activities is to develop ideas to be able to implement programs that have been implemented this year. The activities carried out in the future are expected to have a positive and direct impact on the community at large. The limitations of this community service activity are related to the still limited range of activity locations which are too far away making it difficult to carry out activities directly. This limitation can be overcome by activities carried out online.

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