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Green School Based Management Model as A Powerful Alternative Solution to Overcome Global Climate Change: A Need Assessment Survey Analysis of Teacher in Lampung, Indonesia

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Abstract. The roles and responsibilities of schools in dealing with 21st-century problems, especially those related to global climate change which treats the entire world, become a challenge for school communities to take part to overcome this problem we proposed Green School Based Management Model (Green SBM Model). Green SBM Model is a new model that has been proposed to be conducted in all schools in Lampung. Just because the existed SBM Model focused on school improvement plans/ learning outcomes only (management of human resources, materials, finance, strategic planning, program management, and marketing oriented). Before conducting Green SBM Model, we do need assessment survey for the teacher in Lampung Indonesia to know teacher perception about global warming and its solution. The design of this study is a cross-sectional non-experimental descriptive survey approach using a questionnaire to 107 teachers in Lampung, Indonesia. Based on data analysis, it can be concluded that all of the teachers realized the negative impact of global warming and they should take a part in overcoming the negative impact of global warming. Besides that, teachers also believed that Green School Based Management Model is a powerful model which can be a solution to overcome the negative impact of global warming.

1. Introduction

Climate change is one of the most important global challenges in the 21st century, but an understanding of the public's reaction, especially the school community, to this problem has not taken more attention [1]. Public resilience to behavioral change that is relevant to the negative impacts of climate change has become a major issue for scientific research throughout the hemisphere, especially given the increase in public awareness of scientific arguments about how good it is to prepare people to have adaptations to the phenomenon [2]. Scientists argue that communicating climate change must take into account the attitudes, values and psychological needs that exist from audiences where adaptation programs and risk reduction impacts of climate change are applied, including in education [3-4].

Integrating disaster risk reduction (DRR) or disaster risk reduction (DRR) programs, including the impacts of climate change into formal and curricular education, has been suggested as a strategy to help increase knowledge and understanding of disaster risk. Although there have been some initial advances in initiating DRR integration into school curricula in Indonesia, this has been largely limited to national level policies. Several studies that try to analyze the integration of knowledge and disaster education into the school curriculum comprehensively, ranging from national policy levels to local implementation in schools in Indonesia are still partial, in the form of teacher improvisation and student creativity has not become a real school program in the management context school-based [5]. Furthermore, the findings of [6] show that concerns about school adaptation to the impacts of global climate change have not been consistently shown or dealt with in



school curricula in Indonesia, in other words it has not become a part of school management massively and integrated in the implementation of school-based or school-based management is integrated with the school curriculum.

School-based management (SBM) or in international language referred to as School-Based Management (SBM) by fully giving authority and responsibility to school-level decision-makers has become the most prominent feature of public school management systems in most countries around the world, not only related to instructional effect learning outcomes in the form of changes in cognitive, affective, and psychomotor behavior but also the effects of accompaniment or nurturant effects such as caring for the environment and cooperating or working together as a form of social intelligence [7]. School-based management (SBM) is a worldwide education reform strategy that emerges in a variety of management senses based on local strengths and potential, community-based potential decision-making, school-based decision making, and decision making with school communities in all aspects of school life as a system social and emotional for the school community, especially students, which are carried out comprehensively in accordance with the demands of the times and the needs of the community [8].

The Indonesian government since 1994 through the Directorate of Primary and Secondary Education has adopted a new approach in managing schools, which is known as School-Based Management (SBM) nationally and sustainably. Through SBM, schools as a community empowerment system are empowered to manage education in a comprehensive manner that not only brings changes to the school management system, but this will affect the policies and orientation of community participation in the implementation of education oriented to solving problems both locally and globally. Thus developing a model for implementing SBM in the context of social responsibility related to the global phenomenon of the 21st century, especially building literacy and the ability to adapt to school citizens, especially students, in anticipating the risks of global climate change impacts become new challenges and paradigms in the implementation of SBM in Indonesia.

2. Method

The design of this study is a cross-sectional non-experimental descriptive survey approach using a questionnaire. The questionnaire is subjected to the 107 secondary teachers in Lampung, Indonesia, using random sampling. The questionnaire consisted of 13 questions which consisted of 4 categories response (extremely agree, agree, disagree, and extremely disagree). The questionnaire also explored about teacher's perception of Global Warming and its solution.

3. Result and Discussion

Global warming becomes a hot issue that is currently being discussed in all the world. It challenges us to take a part in overcoming this problem by giving an alternative powerful solution in the education field by designing Green School Based Management Model (Green SBM Model). But, before validating and conducting this model, we made a survey analysis about teacher's perception of Global Warming and over the alternative solution. The survey analysis based on a questionnaire which we have been distributed to 104 secondary teachers.

3.1. Teacher's Perception of Global Warming

Teacher's perception of global warming talks about teacher's idea, which is divided into two categories, the teacher's awareness of its negative effect and the teacher's responsibility to overcome this problem.

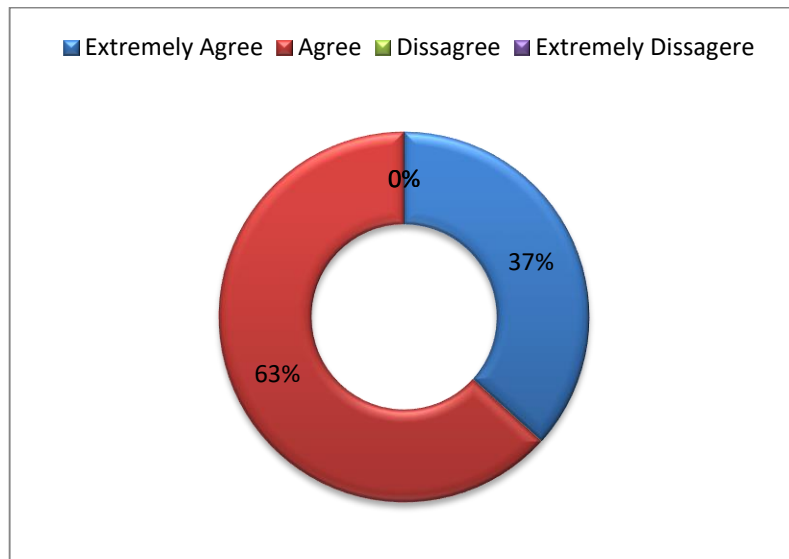


Figure 1 Teacher's awareness of the negative effect of global warming

Based on picture 1, about 66,3% teachers extremely agree that they know well the negative impact caused by global warming, and the rests agree. It can be concluded that all the teachers know well the negative impact of global warming.

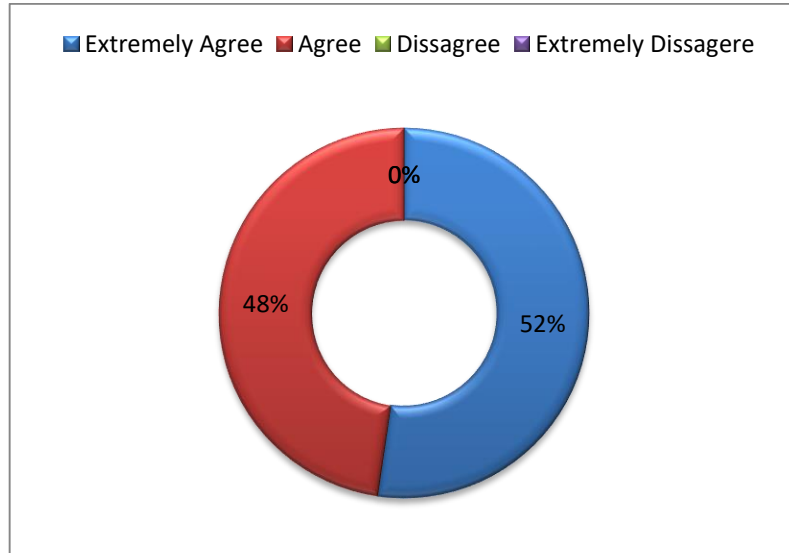


Figure 2 Teacher's responsibility to overcome the negative effect of global warming

Picture 2 tells us that all the teachers also have a responsibility to overcome the negative impact of global warming. Based on the data, it means the teachers have very good prior knowledge about awareness and responsibility in facing global warming.

Based on the teachers' perception of global warming including awareness and responsibility, they know well about the change of climate which the quality of environments is decreasing as time have been going. If it is left unchecked, we are going to have a big problem and bequeath a heavy burden to the next generations in the future, especially in the way of surviving in bad surroundings. This awareness directs teachers to think that they and all elements of society are responsible for correcting this problem. Therefore, researchers offer a green school management model so that future generations or students can have a green character to be applied in both academic and non-academic activities. However, before this model is applied, researchers need to get feedback whether this model is suitable and accepted by the community or not.

3.2. Teacher Perception about Proposed Solution

In this part, teachers were asked their perception about the model which will be proposed cannot overcome the negative impact of global warming and readiness in conducted Green SBM Model.

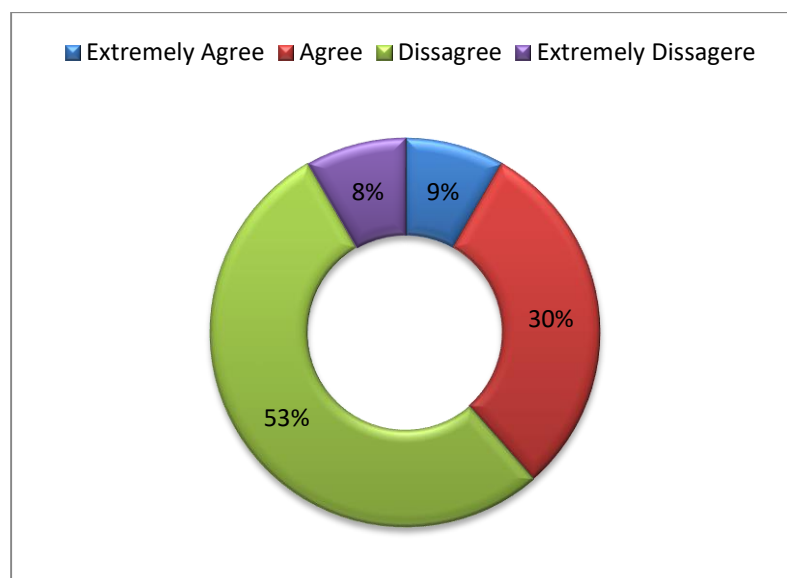


Figure 3 Teacher's perception about Green SBM Model cannot overcome the negative impact of global warming

Based on Figure 3, it can be concluded that more than 50% of teachers extremely believe that Green SBM Model is able to overcome the negative impact of global warming. But, unfortunately, there were 8,3% teachers are extremely disagree.

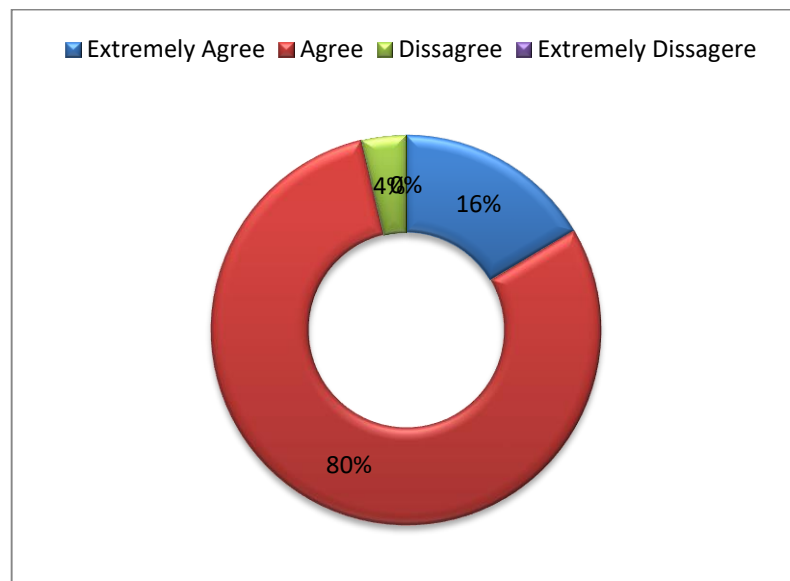


Figure 4 Teacher's readiness in conducted Green SBM Model

Based on Figure 4, it can be concluded that almost 80% of teachers are ready to conduct Green SBM Model at school. It indicates a positive response from teachers. Based on the questionnaire, also known that Green School Based Management Model which has been proposed becoming a powerful model which can be a powerful solution to overcome the negative impact of global warming. Moreover, school is the smallest environment that best knows how to educate students to have a green character. Student's activities in school can also be controlled, both by fellow students and between students, teachers, and school employees. Thus, when one element of the school community does what does not reflect the green character, the other elements will immediately remind them to act in accordance with the objectives of the green school. If this is accustomed, along with the passage of time all elements of the school community will have habits that eventually form a green character. Therefore, the authority of schools to manage and develop their own green school-based management needs to be given. This has also been done in the education system in Australia which applies a new concept of education decentralization to the regional level by providing significant strength and authority to the school level with community participation in school governance [9].

In addition, school governing agency in England and Wales have been given broader authority to manage their own affairs while still referring to a clear national framework [10]. Thus, schools will be easier and sooner to evaluate when there are irregularities committed by school residents. This system contributes to improving teaching and learning, financial and administrative management, professional recruitment standards, and academic and school management performance [11].

4. Conclusions

Based on the results and discussions, it can be concluded that all of the teachers are realize about the negative impact of global warming and they should take a part in overcoming the negative impact of global warming. To overcome the negative impact of global warming, teachers believe that it needs an alternative model which can be easily conducted. Teachers also believe that Green School Based Management Model is a powerful model which can be a solution as its impact.

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