A new decade for social changes
Designing a Green-School Education Model of Community Development in Rural Areas

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Abstract. Education is an important factor in developing human resources as development actors take advantage of the potential of natural, social, and economic resources in rural areas in the form of green schools. The purpose of this research is to design a model of green-school education as community development in rural areas. The research used Participatory Learning and Action (PLA) with direct observation, analysis of documentation, open interviews, and Focus Group Discussions (FGD). Determination of research locations at the "Green Kids" School educational institutions in Sokaraja and the Baturaden Green School of Banyumas Regency, Central Java of Indonesia. Research informants were determined by purposive sampling consisting of foundation administrators, teachers or teachers and students, educational leaders, educational activists or activists, experts, and educational practitioners. The research analysis uses verification analysis and data triangulation to reduce, classify and design models. The results (1) Education can be designed with a curriculum based on the natural, social and cultural potential of the community in the form of a green school institution. (2) Green-School is very important in utilizing, preserving, and developing the potential of natural resources such as agriculture, animal husbandry, fisheries, plantations, and forestry which are the uniqueness and advantages of rural communities.

Keywords. Education, Community Development, Green-School, Model, Participatory Learning

1. Introduction

Research, studies, and implementation activities are important to be continued and followed up, especially regarding the agribusiness or agroforestry-based school program called "Green School" which has been successfully carried out by Madrasah Tsanawiyah (MTs) in Pakis. Because according to the research results of the first-year research team (2021), agrarian-based resources, especially agriculture, are very supportive of social, economic, and cultural development or local wisdom in rural areas. MTs Pakis have uniqueness, characteristics, and advantages by managing, preserving, utilizing, and developing the potential of natural resources as local resources in Gunung Lurah Village, Cilongok District, Banyumas, Central Java of Indonesia as an important research location to be used as a pilot or pioneer for institutions other
education. The Pakis Banyumas educational institution also has a very high concern for forest edge communities who cannot afford (poor) by reaching or inviting their children to continue to attend education with limited costs, namely school registration, re-registration, building fees, and school fees or Education Cost Donations monthly with the payment, but still as much as possible. Payment of tuition fees at MTs Pakis Banyumas which is paid for with agricultural products such as cassava, sweet potatoes, taro, rice, and coffee. Another uniqueness of MTs Pakis Banyumas is that it is a nature school with a curriculum program and the implementation of education also utilizes, conserves, and manages the potential of natural resources, especially in agriculture in fields and gardens for secondary crops and forest land. Payment of tuition fees at MTs Pakis Banyumas which is paid for with agricultural products such as cassava, sweet potatoes, taro, rice, and coffee. Another uniqueness of MTs Pakis Banyumas is that it is a nature school with a curriculum program and the implementation of education also utilizes, conserves, and manages the potential of natural resources, especially in agriculture in fields and gardens for secondary crops and forest land. Payment of tuition fees at MTs Pakis Banyumas which is paid for with agricultural products such as cassava, sweet potatoes, taro, rice, and coffee. Another uniqueness of MTs Pakis Banyumas is that it is a nature school with a curriculum program and the implementation of education also utilizes, conserves, and manages the potential of natural resources, especially in agriculture in fields and gardens for secondary crops and forest land.

The importance of further research on the concept of green school education is also a medium for preserving the potential of agricultural socio-economic resources, especially for the young generation in rural areas who are future actors in continuing development. Then the green school institution became an informal and non-formal education program for the Package C level of Junior High School which helps the younger generation who are less and unable to continue formal schooling both in terms of time and distance that are quite far, or because the ability of family funds is uncertain or underprivileged. So by substituting agricultural products for education costs in green schools, it becomes characteristic and local wisdom that helps students in rural areas.

Education is one of the important factors in determining the development and quality of human resources as the main actor to manage, maintain or preserve, controlling, and improving other resources such as natural, economic, social, and cultural resources for mutual prosperity. Education is a means and a real guarantee in the process of realizing the state's goal to educate the nation's life that needs full attention and support both in formal, informal, and non-formal education. So that the implementation of education does not only rely on the government but is the obligation of all parties, especially community groups such as civil society and also private parties who are members of foundations, study groups, and social and religious educational institutions that have taken root.

Formal education which has been carried out with government policies, support, and standardization needs to also be equipped with acceleration, creation, and innovation of concepts, programs, and implementation of educational curricula that prioritize the development and preservation of the potential of local resources, local wisdom and the benefit of local communities. So that the orientation of education in addition to achieving the target of external achievement or output in the form of mastery of knowledge (cognition), but also achieving a strong, creative, and innovative mental attitude, motivation, and mindset, then being able to have skills or expertise skills that give birth to real works that are beneficial to society as outcomes.
So the focus of research in year II (2022) is to compare, adopt or compile Pakis educational institutions that have successfully owned and run green school programs with research in two other educational institutions, namely the "Green Kids" School in Sokaraja Banyumas and the Baturaden Green-School.

The need for the development of nature-based schools or "green schools" apart from the results of research in the year I (2021) there are also other research results that emphasize the importance of children's education in the community following local characteristics and wisdom, as according to Syafaruddin and Nasution[7] the learning process as a change in knowledge, skills or attitudes through the communication process. Character education is an effort to cultivate intelligence in thinking, appreciation in the form of attitudes, and practice as behavior that is under the noble values of religion and norms in society[8].

The Nature-Based Learning model provides facilities for all the development of children’s abilities such as moral and religious values, cognitive abilities, language skills, physical motor skills, and social-emotional abilities, artistic abilities. An environmental-based education model that involves moral values and local wisdom in their environment as topics in learning activities with topics that are familiar with everyday life[9][10][11][12][13][14].

Based on the uniqueness and advantages of Pakis educational institutions in Cilongok, Banyumas Regency which will be compared and even compiled on learning models or methods, it is necessary to get attention and support in the form of empowerment programs and their implementation from the results of studies, research and community service through child-based education. Green-Schools rural social engineering. Education is essentially the same and relevant to the practice of community development or community empowerment which provides empowerment to individuals or groups with motivation, inspiration, knowledge, understanding, skills or expertise, and cooperation or partnership or networking that empowerment runs a participatory practice that involves all parties utilizes local resources, provides motivation, knowledge, experience, skills, and access to partnerships either carried out by parties outside the community (outsiders) or by the community itself (insiders) to develop themselves, other people and groups in the socio-economic field to improve welfare and create independence in the community.

2. Research Methods

The relevant research method in community development is the Participatory Learning and Action (PLA) method[15][16] as a form of qualitative research to identify community problems and potentials and gain a deep understanding of the situation of a community. the community as a community worker analyzes and makes decisions from the problems faced as an assessment, learning process, optimizing aspirations and participation from the conditions or problems faced from, with and for the community, the main principles are: (1) Prioritizing the less fortunate to know the reality of the problems faced. actually; (2) Emphasizing the assessment process as a process of empowerment (learning and strengthening) for the community and community workers; (3) The principle of learning and respecting differences. (4) The process of re-checking or triangulation (check and re-check) on the data obtained both from the results of observations, documentation, and interviews as well as FGDs. (5) Implementation is informal, optimizing results, sustainable, practical orientation, and open.

Determination of research locations at the "Green Kids" School educational institutions in Sokaraja and the Baturaden Green-School Banyumas Regency, Central Java of Indonesia, which have uniqueness, characteristics, and advantages by managing, preserving, utilizing, and developing the potential of natural resources and local resources. Both educational institutions
as research sites need attention and support because they develop models and their implementation in Green-School-based children's education as an important rural social engineering to be used as a pilot or pioneer for other educational institutions. Research informants through purposive sampling consisted of foundation administrators, teachers or teachers and students, educational leaders, activists or activists, experts, and education practitioners.

The research data were obtained by direct observation, analysis of documentation, and open or unstructured interviews, as well as Focus Group Discussions (FGD). Research using participatory methods can use data analysis with verification and triangulation, namely: (1) Triangulation principles are used both in methods, sources and disciplines. (2) Looking for diversity and at the same time differences. (3) Investigation directly from and with local communities. Based on the potential and problems in social engineering in rural areas, especially in the field of education in the community to improve the quality of human resources and realize people-centered development or "people-centered development" for the sake of prosperity in equity and equity in justice. Then the research formulation can be made as follows, namely, how is the development of a Green-School-based child education model as social engineering in rural areas?

3. Results and Discussion

The results of year I (2021) become important material as a preliminary study to carry out further research and studies in year II (2022) which still focus on the theme of social engineering, rural development, and community empowerment (social engineering, rural development, and community empowerment), with the theme flagship "form of social engineering and education" for model development Green-School-based education as social engineering in rural areas.

Preliminary studies, research results in the year I (2021), and literature studies are an important basis for compiling and proposing further research in year II (2022) the stages are as follows: First, conduct a literature study from the results of previous research, namely competency development research and research results in journals. scientific journals, facts, and social reality data in the mass media and reviewed in discussions with fellow practitioners, experts, and empowerment activists. Second, conducting surveys, observations, and preliminary interviews as well as collecting documentation of the research location. Third, hold discussions with the team and colleagues of experts, practitioners, and empowerment activists about the preliminary results. Fourth, determine and formulate very important topics, problems, and research focus on social engineering, Green-School-based education as social engineering in rural areas to improve the quality and capacity of rural human resources for the welfare of the community.

3.1. Potential and Problems of Green-School

Based on the research results of the research team in the first year (2021) on the study of community empowerment in "green school"-based educational institutions as well as the results of literature studies, including follow-up studies in new locations, namely “Green Kids” School in Sokaraja Banyumas and Baturaden Green-School for year II (2022) which has unique and interesting potential, namely: (1) There is potential for developing the quality of human resources as a form of rural empowerment and engineering programs, namely through formal, informal, and non-formal educational institutions, with educational materials and social skills religious, socio-economic, socio-cultural and artistic that already exist and play a role in society.
There is also the potential for education based on nature-based schools or known as Green Schools that prioritize education by utilizing, preserving, and developing the nuances of beauty, coolness, and authenticity of nature, both fields, gardens, rice fields, and protected forests in rural areas. Education in rural areas is very potential for skills or other skills (soft skills) such as religious education, agriculture, animal husbandry, plantations, and fisheries that utilize natural resources, authenticity, and natural beauty. Art, culture, and sports education can also take advantage of natural resources such as hills, mountains, rivers, forests, and beaches.

Many potential resources in rural areas, especially natural resources such as agriculture and forestry can be used as learning media, but as a result of development and waste causing environmental damage and authenticity of nature and the problem of saturation of the education system in the classroom or room\cite{18}\cite{19}\cite{20}\cite{21}\cite{22}. So that it requires efforts to preserve, maintain and manage natural resources as a characteristic, superiority, and wealth of resources for the development of nature-based education for the community. The problem with empowerment programs and implementation, especially in education, is that the process of formulating empowerment programs at the Village Development Planning Deliberation still does not provide opportunities for communities or educational groups because it is considered that the education sector already has its domain from the Education Office and national programs. Even though the education sector in rural areas already has formal education institutions such as Elementary Schools and Junior High Schools, they still need additional non-formal and informal education that supports the formal education process such as deepening and mentoring lessons, assignments, and linkage of subject matter in formal schools. Then informal and non-formal education also provides a teaching process, knowledge, and skills that are not taught in formal education such as recitation and more specific religious materials as well as reading the Qur'an, farming skills, agriculture, plantations, fisheries, arts and culture, and sports, especially for students or the younger generation. Non-formal and informal education in rural areas is generally only in Early Childhood Education, education which is once a month and is mostly concerned with maintaining the health of pregnant and lactating mothers and children under five.

Empowerment programs and implementation have not yet received support from village assistant scholars whose focus is on planning, proposing, and reporting village development program activities. The planning and implementation of empowerment still lack support from the village government which is more likely to carry out physical or infrastructure development as well as provide allowances and facilities on the apparatus\cite{23}\cite{24}\cite{25}\cite{26}. Community participation in empowerment requires the support of universities to be able to become companions or facilitators and instructors in activities. Knowledge and skills as well as the number of empowerment cadres are still low, so they need care and attention to increase the capacity and competence of activists, cadres, and observers of empowerment.

3.2. Designing a Green-School Education Model

This research is very strategic and important, especially for the development of science, study materials, assignments, and student practice and adding references to the Green-School-based child education model as social engineering in rural areas that is interesting, unique, and has novelty research that has never been seen before. someone researched it. Green-School-based education is very important in supporting innovation, creation, and local wisdom to develop the capacity and quality of bicycle human resources as the implementation of “people-centered development”.
This research is relevant and is an implementation of Unsoed's vision and its commitment to developing tropical rural resources and local wisdom. The main theme of the program "Social engineering, rural development, and community empowerment, with the topic "Gender and social inclusion in rural areas in the form of social engineering and community empowerment for education"

Based on the results of preliminary studies, first-year studies (2021), and literature studies by conducting a good review process with discussions, research results in scientific journals, seminars, and mass media analysis, it can be made state-of-the-art research, as for the studies conducted in the construction of (1) educational institutions in rural areas (2) social engineering in rural development (3) the role of empowerment in education in the community. Then it becomes a foundation and development of research studies of very important and strategic phenomena to determine similarities and differences in research so that it can determine the novelty of the research (novelty).

Designing a green-school education model is not only based on the results of the implementation of the research design, it is also important to involve the benefits of partnerships, namely:

1. The involvement of educational institution partners "Green Kids Schools" in Sokaraja Banyumas and Sekolah Alam Baturaden as research subjects and beneficiaries in developing a Green-School-based child education model as social engineering in rural areas. The benefits of the partnership are that the "Green Kids School" educational institution in Sokaraja Banyumas and Sekolah Alam Baturaden is participative and involved in the research process to identify and analyze problems, potentials, and prospects as social engineering efforts in rural education are more advanced.

2. The involvement of partner educational institutions "Green Kids Schools" in Sokaraja Banyumas and Sekolah Alam Baturaden as research subjects and beneficiaries in developing a Green-School-based child education model as social engineering in rural areas. The benefits of the partnership are being resourced persons, instructors, facilitators, and assistants in the research and implementation of Green-School-based children's education models as social engineering in rural areas.

3. Communities of education activists or activists, experts, and practitioners as well as education empowerment academics in villages who are involved in the process and use of research results for social engineering that are more useful in improving the competence of children's human resources in rural areas. The benefits can be as a location and research results can be used for further research, community service, lecture assignments, practicums, internships, and student real-work lectures.

4. The village government, the mass media community, and the private sector participate and support the implementation of the benefits of research activities. Become a village and a pilot educational institution on the Green-School-based children's education model as social engineering in rural areas to improve the quality and capacity of human resources, especially rural children for the welfare of the community.

Education as social engineering in rural areas as a form of community development is a method of social work whose main goal is to improve and improve the quality of life of the community through the utilization and processing of potential resources with social participation

Designing a participation and empowerment model for institutional development consists of several stages namely: (1) Preparation Stage, namely the preparation of officers needed to equalize perceptions among change agent team members.
Then, field preparation is to initially conduct a feasibility study on the area to be targeted, both formally and informally. (2) Assessment stage, which is carried out by identifying the problem of perceived needs and also the resources owned by the client. (3) Alternative Program or Activity Planning Phase. Where change agents (community workers) in a participatory manner try to involve citizens to think about the problems they face and how to overcome them. (4) Action Plan Formulation Stage. Change agents (community workers) help each group to formulate and determine what programs and activities they will undertake to address the existing problems. (5) Stage of Program or Activity Implementation. This stage is the most crucial (important) in the community development process. (6) Evaluation stage, as a process of supervision from residents and officers on ongoing programs for community development, should be carried out by involving residents. (7) Termination Stage, is the stage of formally terminating the relationship with the target community.

Based on the results of the first year of research (2020) which resulted in a "Green-School"-based education model as shown in Figure 5, there is a uniqueness and advantage of educational institutions in the "Green Kids" School in Sokaraja Banyumas and the Baturaden Green-School, it is necessary to receive attention and support in the form of empowerment program and its implementation from the results of studies, research and community service through Green-School-based children's education as social engineering in rural areas. Education is essentially the same and relevant to the practice of community development (community development) or community empowerment (community empowerment) which provides empowerment to individuals or groups with motivation, inspiration, knowledge, understanding, skills or expertise, and cooperation or partnership (networking).

Formal education which has been carried out with government policies, support, and standardization needs to also be equipped with acceleration, creation, and innovation of concepts. And then programs and implementation of educational curricula that prioritize the development and preservation of the potential of local resources, local wisdom, and the benefit of local communities. So that the orientation of education in addition to achieving the target of external achievement or output in the form of mastery of knowledge (cognition), but also achieving a strong, creative, and innovative mental attitude, motivation, and mindset (mindset), then can have skills or expertise (skills) that produce results, real work that is beneficial to society as an outcome.

So it is necessary to get attention and support in the form of an empowerment program model as shown in Figure 1 and its implementation from the results of studies, research, and community service through child-based education. Eco-green or Green-Schools rural social engineering. Education is essentially the same and relevant to the practice of community development (community development) or community empowerment (community empowerment) which provides empowerment to individuals or groups with motivation, inspiration, knowledge, understanding, skills or expertise, and cooperation or partnership (networking).
Figure 1. Educational Empowerment Model *Green School*
The empowerment program is designed to have the main objective of increasing the awareness of students and the surrounding community on the importance of education for them. The low level of education of the residents in the village ultimately makes them lack the awareness to live independently by managing and maximizing existing resources. Both human resources and natural resources around green school educational institutions are very abundant and have the potential to be something that brings more benefits to them.

The problem with green-school educational institutions is that there are no permanent teachers as teachers and other learning facilities that can support the learning process. Therefore, our group designed an empowerment program that involves external parties, especially students, to become volunteer teachers who provide knowledge and skills to students and then they continue to transfer the knowledge to others. Our group is also designing an empowerment program in the form of entrepreneurship that will involve related organizations to assist in carrying out this empowerment for students and the surrounding community. These communication actors will assist students and the community in utilizing their potential and giving them "power" to then be able to live more independently and prosperously. We hope that the profits that will be obtained from the entrepreneurship program can be used to fulfill the learning support facilities needed by students in green-school educational institutions.

Green-school educational institutions in addition to implementing a formal education curriculum under the standardization provisions that have been set can also improve agroforestry-based curriculum materials to realize a green school that utilizes local resources ranging from agriculture, plantations, fisheries, livestock, and ecotourism-based tourism, then the materials are as follows: (1) materials for the preservation and utilization of local resources, (2) materials for success stories in the utilization of local resource potential, (3) training and assistance in the use of local resources, (4) training and assistance in making social media for the promotion of conservation and utilization of local resources. (5) Training to increase knowledge, awareness, and skills in health protocols to prevent the spread of Covid 19.

4. Conclusion

Education is one of the important factors in determining the development and quality of human resources as the main actor to manage, maintain or preserve, controlling, and improve other resources such as natural, economic, social, and cultural resources for mutual prosperity. Education is a means and a real guarantee in the process of realizing the state's goal to educate the nation's life that needs full attention and support both in formal, informal, and non-formal education. So that the implementation of education does not only rely on the government but is the obligation of all parties, especially community groups such as civil society and also private parties who are members of foundations, study groups, and social and religious educational institutions that have taken root, exist and play a role in society.

We hope that students and communities around our green-school educational institutions will have high awareness and concern for the importance of education. In addition, it also requires high participation from them to be involved in the empowerment program and not easily give up and stop when the empowerment program has reached its target. It is hoped that they can continue the program and carry out new empowerment programs by maximizing all the potential of existing resources around green-school educational institutions.

The government is expected to continue to carry out socialization and assistance in empowerment programs to achieve the success of the program. We also hope that the government can assist with the lack of existing facilities, especially in terms of learning such as
computers and adequate internet access to support the learning process in green-school educational institutions.

After seeing the conditions that occur directly in green-school educational institutions, researchers hope to have a high spirit to participate in helping them and providing assistance in the empowerment program that has been designed. In addition, we also hope for the participation of other students to participate as volunteers to impart their knowledge to students in green-school educational institutions. Thus, students have new skills that will later be useful for their self-development.

Empowerment is an effort to maximize the existing usability. Therefore, community empowerment can be said as an effort to help people to help themselves, which means helping the community so that later the community will be able to help and empower themselves. The formulation and implementation of program empowerment can be initiated by outsiders such as the education office, empowerment office, and academics together with the managers of green-school educational institutions, including the surrounding community. So that the empowerment program will become a shared property and responsibility.

References


