The Contribution of Implementation Adiwiyata Program on Environment Caring Character at Senior High School Adiwiyata in Pandeglang Banten

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Abstract

Adiwiyata program was formed to form and develop the environmental caring character of school, especially learners, but the phenomenon of research in schools that are the subject of research, still violations committed by some learners that indicate the environmental caring character of learners at Adiwiyata school in Pandeglang is still low. The purpose of this study is to calculate the contribution to the formation of environmental-care characters cognitive, affective and psychomotor aspects of students in SMA Adiwiyata Pandeglang Banten. The method in this research used quantitative descriptive. The data collection used observation, questionnaire, interview, and documentation, while data analysis techniques using correlation coefficient test, regression test and coefficient of determination. The school, which is the subject of this research were two Adiwiyata schools and the other one was non-Adiwiyata in Pandeglang Banten with the sample was 325 respondents. The results of the research showed that the implementation of Adiwiyata program has a significant contribution to formation of character environmentally cognitive, affective and psychomotor learners, but its contribution is not balanced on the three aspects. Contributions Adiwiyata program was high only on cognitive and psychomotor aspects, while the contribution of affective aspect was low.

Keywords: Adiwiyata Program; Character building; Environmental Care characters.

Introduction

Sustainable Development Goals (SDGs) is a global development paradigm, which was declared by the United Nations member states at the end of 2015 as a continuation of the concept of the Millennium Development Goals (MDGs) that are one of the decisions related to the environment (Hoelman et al. 2015). The deal is evidence of concern for the member states of the United Nations will be the environment and sustainable development (sustainable development), given routines made disasters human hand has occurred and spread all over the world such as floods, landslides, abrasion, erosion and other. The disaster will cause a decline in environmental quality and will threaten the survival of human life and other living things.

The environmental damage that occurs is largely the act of human hands. Human dependence on the environment is a major factor in environmental destruction. This is in line with what Awantara stated (2011) that: "The current environmental damage also stems from human mismanagement of the perspective and errors of natural resource exploration". This is confirmed by Maryani (2015) that excessive exploration, let alone ignores these moral and ethical aspects that cause environmental damage. Humans who are supposed to maintain, preserve, and preserve the environment are increasingly putting enormous pressure on the environment. Massive exploitation of natural resources, irrespective of environmental carrying capacity and capacity has led to environmental degradation and pollution. Related to the increasingly diverse environmental issues, it is necessary to have a management to ensure that the existing environment and the

quality decline has not become worse yet there is a better recovery. In Article 65 point 4 of Law Number 32 year 2009 on Environmental Protection and Management, it is mentioned that everyone has the right and role in environmental management. In this case, educational institutions are also expected to participate and play the role in environmental management.

The formation of human behavior or character that care about the environment will be more effective and organized with the help of educational institutions that belong to formal education category. According to Bruyere (2008), one of the efforts to improve the environmental character of the learners is the policy to include the subjects of Environmental Education in the school curriculum. Furthermore, in the world of education according to Puk & Behm (2003), environmental caring characters should be the main focus in the educational curriculum in the effort to face the serious challenges of future environmental problems. The reality in the field, there are still many schools that do not have formal planning and character education organization. Almost all of schools are giving up the process of character education, especially the environmental caring character to the teachers as the functional personnel. The demands given to schools by teachers without balanced supportive policies will be difficult to achieve. A character education management system should be owned by the school as part of the school governance system. The system ensures that there is planning, organizing, implementation and monitoring of character education in accordance with the curriculum implemented in schools and National.

Efforts to form and develop the character of learners, especially the environmental caring character has been started through the learning of Environmental Education in Indonesia since early 1970. Implementation of Environmental Education in schools to get better results should be observed and monitored by all stakeholders. The character that will be formed and developed from the learning result of Environmental Education need to be monitored and evaluated so that the purpose of the character to be achieved will be realized. The character is formed from the nature of a person's descriptions are relatively stable and believed and used as a basis for perspective, thinking, attitude and action (Kemendikbud, 2011; Stedje, 2010; Ovadia & Steger, 2010). Therefore, the habituation of Environmental Education and its implementation in daily activities or environmental caring behavior will form a character that cares about its environment or is called by the term of environmental cares.

But we must admit that until now the concern for the new environment is owned only by a few individuals. Many of us who are less even not care about the environment. Still, quite a lot found the handling of environmental problems is only a mere rhetoric, so that environmental problems have not been able to find solutions and how to overcome them. To overcome these problems, the government through the Ministry of Environment and Ministry of National Education in 2006 developed the Environmental Education program at the level of primary and secondary education through Adiwiyata program. The Adiwiyata program was formed due to the government's concerns about the degradation of environmental quality and quantity. The quality and quantity of the environment are declining due to people's ignorance of the environment. Learners as part of the community need to be educated and nurtured to be shaped and grown development awareness to the environment. The Government has made efforts through the Adiwiyata Program. This program is a step that is considered appropriate to create a school that is committed to educating and nurtures learners to have a caring and cultured environment. This is in line with what Gunawan (2016) The main activities of the Adiwiyata program in schools are directed towards the realization of a caring and environmentally cultured school institution for primary and secondary schools in Indonesia.

In its development, Adiwiyata program is not easy to apply in schools located in Indonesia, it is because Adiwiyata program needs a means of supporting the infrastructure to cultivate environmental awareness for students. However, with the Adiwiyata program can actually help the school in shaping and developing the environmental character of the learners. Environmental conditions and problems at this time

needed preventive efforts in tackling or reducing the impact of environmental damage that has or will occur. One of the efforts to prevent or mitigate the impact of environmental damage is by improving Environmental Education and developing Adiwiyata program in schools.

Method

This research used a descriptive method. The reason the researcher chose descriptive method is the researcher wants to reveal actual problems which often become a higlight conversation at the present time, besides with this method can give a description of school policy with the environment and also calculate its influence to the ecological intelligence of learner in SMA Adiwiyata in Pandeglang. Type of investigation used in this study is a causal relationship, that is the type of investigation that aims to determine the magnitude of the effect of the independent variable on the dependent variable. In this study, researchers used a quantitative approach (deductive), because these studies would be presented in the form of numbers. The quantitative approach is an attempt to measure the variables that exist in the study (variables X and Y variables) to then look for the influence and relationship of the two variables. The location of this research was in SMA Adiwiyata in Pandeglang, with details as follows:

Tabel 1. List of Research Sites

School Name	Administrative Location	Geographical Location
SMA Negeri 1 Pandeglang	Jl. Raya Serang KM. 3, Pandeglang District, Pandeglang Regency, Banten Province 42251.	6˚16'58.18"LS dan 106˚06'59.32"BT
SMA Negeri 4 Pandeglang	Jl. Raya Labuan KM. 20, Alaswangi Village, Menes Sub-district, Pandeglang District, Banten Province 42262.	6˚23'19.09"LS dan 105˚54'55.30"BT
SMA Negeri 15 Pandeglang	Jl. Raya Carita KM. 05, Banjarmasin Village, Carita Sub-district, Pandeglang District, Banten Province.	6˚19'52.16"LS dan 105˚49'53.14"BT

The population in this study were students in SMA Adiwiyata Pandeglang Banten regency. The population in detail in this study were students of class XI and XII in SMA Negeri 1, 4 and 15 Pandeglang, with each amounting to 859, 725 and 156 learners. The reason for taking population only class XI and XII in all three schools is because students of class XI and XII have been staying longer in the school and have got a touch longer for Adiwiyata program. Determination of the number of samples using Slovin formula with 5% precision, so that the samples obtained amounted to 161, 135 and 29 respondents and the total number of 325 respondents. Data collection techniques used observation, questionnaires, and documentation, while data analysis techniques using statistical parametric test. The hypothesis proposed this research is: "The more the school policies related to the better character Adiwiyata caring environment:, learners with Null hypothesis ($H_{0:}$) "there is a significant contribution of the implementation of the program towards the formation of character Adiwiyata environmentally conscious cognitive aspects, affective and psychomotor learners in high school Adiwiyata Pandeglang Banten" and the alternative hypothesis (H_a) "there is no significant contribution from the implementation of the program Adiwiyata towards the formation of character environmentally cognitive, affective and psychomotor learners in high school Adiwiyata Pandeglang Banten". Hypothesis testing is done by interpreting the results of linear regression test. The testing mechanism is done by comparing the number of a significance of calculation result with significance number (probability) equal to 0,05. Decisions are taken using criteria "if the number of significance count <0.05; then H_0 accepted', and "if significant numbers count> 0.05; then H_a is rejected.

Results and Discussion

Hypothesis test conducted to determine the effect of the implementation of environmentally sound school policies on improving the ecology of the learner is correlation test, simple regression test and test of determination. All three statistical tests are done so that researchers can interpret the data obtained during the research into information needed to answer the formulation of the problem. The following is the result of statistical test calculations using SPSS 21 software.

Table 2. Comparison of Hypothesis Test Result Data

Aspek	SMA Negeri 1 Pandeglang			SMA Negeri 4 Pandeglang			SMA Negeri 15 Pandeglang		
	R	R *Square*	Sig. F	R	R *Square*	Sig. F	R	R *Square*	Sig. F
$X-Y_1$	0,721	0,520	0,000	0,697	0,485	0,000	0,681	0,464	0,004
$X-Y_2$	0,557	0,311	0,000	0,580	0,337	0,000	0,572	0,328	0,003
$X-Y_3$	0,706	0,498	0,000	0,712	0,507	0,000	0,625	0,390	0,001

The results showed that Adiwiyata program variables have a significant influence on the character of environmental care aspects cognitive, affective and psychomotor learners in SMA Adiwiyata Pandeglang Banten. *First,* based on testing of the linear regression between variables Adiwiyata program with variable character environmentally conscious cognitive aspects in SMAN 1 Pandeglang, the correlation coefficient of 0.721 ($R^2 = 0.520$) and significant at the level of 0,000, the next to the affective aspects of the correlation coefficient of 0.557 ($R^2 = 0.311$) and significant at the 0,000 level, and the last one aspect of psychomotor obtained correlation coefficient of 0,706 ($R^2 = 0.,98$) and significant at the 0.000 level.

Second, testing the linear regression between variables Adiwiyata program with variable character environmentally conscious cognitive aspects in SMAN 4 Pandeglang, the correlation coefficient of 0.697 ($R^2 = 0.485$) and significant at the level of 0,000, the next to the affective aspects of the correlation coefficient of 0.580 ($R^2 = 0.337$) and significant at the 0,000 level, and the last one aspect of psychomotor obtained correlation coefficient of 0.712 ($R^2 = 0.507$) and significant at the 0.000 level.

Third, testing linear regression between variables Adiwiyata program with variable character environmentally conscious cognitive aspects in SMA 15 Pandeglang, the correlation coefficient of 0.681 ($R^2 = 0.464$) and significant at the level of 0.004, next to the affective aspects of the correlation coefficient of 0.572 ($R^2 = 0.328$) and significant at the 0.003 level, and the last one aspect of psychomotor obtained correlation coefficient of 0.625 ($R^2 = 0.390$) and significant at the 0.001 level.

Based on the criteria used, then the significance of the calculation results of hypothesis test calculation is, 0,000-0.004 and the significance value of the count is smaller than the value determined to see the significance or not, that is 0.005. Based on this, then H0 is accepted and Ha was rejected. This means that there is a positive and significant influence of school culture on the ecological intelligence of learners in all schools who are the subject of research.

The research findings in the field, environmentally friendly school policies that have been applied in SMA 1, 4 and 15 Pandeglang already contains safeguards and environmental management. Environmental-based school policies can be seen from the vision, mission and objectives and curriculum that are implemented in schools. As an example can be seen SMAN 1 Pandeglang Vision is "Smart; Intellectual, Emotional, Spiritual and Environment cultured and able to Compete in Local and Global". Environmental elements in the mission of SMAN 1 Pandeglang visible on the fourth point is "Organizing Education and is based on faith, religious and Cultured Environment". Furthermore, the purpose of school related to the

environment is on the eighth point of "Having a clean, beautiful school environment, comfortable and safe, with a pleasant environment arrangement".

The Adiwiyata Program requires an environment-based vision, mission, and objective of the school. These three things are the foundation of the school in carrying out activities in school. Any policy taken by schools should pay attention to environmental aspects. In addition, schools are also required to facilitate learning or facilities and infrastructure in supporting environmental education as contained in the vision, mission, goals, and curriculum that have been formulated and established in schools.

Furthermore, to support the implementation of such environmentally sound school policies, the school or in this policy stakeholders (principals, teachers and school committees) allocates a school budget of 20-30% of the total budget. The budget is allocated for environmental protection and management activities such as educational activities, curriculum and learning activities, capacity building of educators and education personnel, the provision of environmentally friendly facilities, infrastructure and partnerships and the last is for the development and improvement of school quality.

Based on the explanation of the above data, it is clear that the program Adiwiyata effect on the formation of environmental care character aspects cognitive, affective and psychomotor learners in SMA Adiwiyata Pandeglang Banten. This is inseparable from the role of Adiwiyata program which starts from the formulation of environmentally sound policy, the implementation of environment based curriculum, participatory based environmental activities and the management of environmentally friendly support facilities. The influence of Adiwiyata program has a moderate and weak percentage value on the formation of the environmental caring character of the aspect of cognitive, affective and psychomotor of SMA Adiwiyata students in Pandeglang Regency because there are still many other influences besides Adiwiyata program to cognitive, affective and psychomotor learners. The formation of environmental cares not only can be done in school, the family has an important role in cultivating character of the child. The family is the main the character in character building.

In addition to schools and teachers, the role of the family is very important to support the success of character education. This is as stated by Mc Elmeel (2002) "The synergy between school and family in supporting the success of character education is needed". The school is the second home for children to develop their own ability, while the family is the main means of education to support the success of the education.Character education not only encourages learners to have knowledge of existing norms. Learners learn to practice in everyday life both in school and in their environment including family.

Further Bahm (2012) takes the definition of the character education as an educational process involving not only schools but all the stakeholders of the school, as well as the state. Character education is held so that citizens learn to become citizens have a character like have honesty, mutual respect, empathy, discipline and care to the environment. Chou et al (2013) Teachers not only reflect on how an educational process is practiced. Teachers are models that become role models for students in understanding, actualizing and reflecting on the values learned in the context of citizens' lives both in school and in society. Character education not only encourages students to have knowledge of existing norms. Students learn to practice it in their daily life both in school and in their environment, how the students are taking care of their surroundings is one of the goals of character education, especially character education.

Conclusion

Based on the results of research and discussion it can be concluded that: (1) schools have made policies to develop ecological intelligence such as the preparation of vision and mission of the school objectives contain environmental protection and management efforts; And (2) There is a significant effect of environmentally sound school policies on the ecological intelligence of learners. First, based on testing of the linear regression between the variables of school policy environmentally sound with intelligence variable ecological aspects of cognition in SMAN 4 Pandeglang, the correlation coefficient of 0.482 (R^2 = 0.232) and

significant at the level of 0,000, the next to the affective aspects of the correlation coefficient of 0.413 ($R^2 = 0.171$) and significant at the .000 level, and the last one aspect of psychomotor obtained correlation coefficient of 0.421 ($R^2 = 0.177$) and significant at the 0.000 level. *Second,* testing the linear regression between the variables of school policy environmentally sound with intelligence variable ecological aspects of cognition in SMAN 1 Pandeglang, the correlation coefficient of 0.544 ($R^2 = 0.296$) and significant at the level of 0,000, the next to the affective aspects of the correlation coefficient of 0.408 ($R^2 = 0.167$) and significant at the .000 level, and the last one aspect of psychomotor obtained correlation coefficient of 0.484 ($R^2 = 0.234$) and significant at the 0.000 level.

References

Awantara, I. G. P. D. (2011). "Peran Etika Lingkungan dalam Memoderasi Pengaruh Kepemimpinan dan Budaya Organisasi Berwawasan". Jurnal Ekosains. Vol. 3 (2). Hlm 105-120.

Bahm, K.L (2012). "The Integration Of Character Education And Its Impact On teachers' professional practice". The University of Missouri-st. Louis. Dissertation

Bruyere, B.L. (2008). "The Effect of Environmental Education on the Ecological Literacy of First-Year College Students". Journal of Natural Resources & Life Sciences Education, Volume 37 2008 (20-26).

Chou., M.J et al (2013). "Confucianism And Character Education: A Chinese View". Journal of Social Sciences 9 (2): hlm 59-66

Gunawan, Zaini. (2016). "Pengembangan Program Adiwiyata dalam Mewujudkan Sekolah Peduli dan Berbudaya Lingkungan". Jurnal Pendidikan. Vol 3 (2). Hlm. 82-95.

Hoelman, et al. (2015). "Panduan SDGs: Untuk Pemerintah Daerah (Kota dan Kabupaten) dan Pemangku Kepentingan Daerah". International NGO Forum on Indonesian Development.

Maryani, E. (2015). Pendekatan Eco-Pedagogis Dalam Upaya Menumbuhkembangkan Kepedulian Lingkungan. Prosiding Seminar Nasional Pendidikan IPS "Aktualisasi Ecopedagogi Dalam Pembelajaran IPS", Universitas Lambung Mangkurat, Banjarmasin, Oktober 2015.

McRlmeell, S.L (2002). "Character Education". Colorado: Greenwood Village.

Ovadia, H. L. and Steger, M. (2010). "Character Strengths and Well-being Among Volunteers and Employees: Toward An Integrative Model". The Journal of Positive Psychology. Vol. 5 (6). Hlm. 419-430.

Puk, T.G. & Behm, D. (2003). "The Diluted Curriculum: The Role of Government in Developing Ecological Literacy as the First Imperative in Ontario Secondary Schools". Canadian Journal of Environmental Education, 8, 217–232.

Stedje, L. B. (2010). "Nuts and Bolts Character Education. Literature Review". Oklahoma: Character First.

Undang-Undang Republik Indonesia Nomor 32 Tahun 2009 Tentang Perlindungan dan Pengelolaan Lingkungan Hidup.