

Strategic Development of School With Environmental Concepts A Case Study At Kharisma Bangsa Bilingual Boarding School And SMAN 8 Pekanbaru

Hasan Yilmaz¹, Zulfan Saam², Auzar³, Amir Awaluddin⁴

Graduate School of Environmental Science Universitas Riau. hyilmazasan@gmail.com

Lecturer at Graduate School of Environmental Science Universitas Riau

Lecturer at Graduate School Universitas Riau

Abstracts

Environmental awareness is of an absolute requirement for effective environmental development efforts. Since it is closely related to the norms and ethics, environmental management by using educational path were a strategic position. Environmental education is specifically important because the world is recently experiencing imbalance (disequilibrium) state in term of environment. The present study aims at formulating development strategies with environmental concept on high school students. Kharisma Bangsa Bilingual Boarding School Tangerang and SMAN 8 Pekanbaru, which have obtained various achievements and appreciation in the environmental field, were taken as object of the study. ASWOT analysis were performed to both schools target for finding out the formulation strategy. The study suggested that both schools Kharisma Bangsa and SMAN 8 should implement an aggressive strategy, the strategy S-O (Quadrant I) which is, applied to high school students. It was found that the students' awareness increased toward the environment which accordingly, were related to that support of parents, schools, and developed environmental activities with the community.

Keywords: Development Strategy, Educational, Environmental

Introduction

Environmental awareness is an absolute requirements for effective environmental development efforts. Educational dimension is a prerequisite in forming the student's character of environmental awareness. A good education service will shape and teach man how to manage and empower nature wisely. According to Sujarna (2014), student with environmental care characters will foster an awareness of someone else. Environmental issues are closely related to the norms and ethics in

controlling the environment. The problems should be solved by technical efforts are supported with educational and persuasive efforts. Educational programs fostering learners to have understanding, awareness, attitudes and environmental behavior in appropriate ways and ethical norms. This effort became the key to achieving school with the environmental concepts.

Environmental management by using educational path has a strategic position in increasing of public awareness. This formal approach is an alternative in providing environment concepts to the student. Environmental education is important because the world is now experiencing imbalance (disequilibrium). Development must now be adjusted because the environmental has disorders with impacts that threaten the sustainability of welfare (Wuryadi, 2009). School with the environmental concepts characterize the behavior of people in schools and school facilities and infrastructure that support school with the environmental concepts.

In line with the idea that education is the key to address the problems faced, some schools in Indonesia, especially the high school level, has made various efforts to actualize school with the environmental concepts. The indicator can be seen from the appreciation to the school that have the environmental concepts.

High school Kharisma Bangsa Tangerang high school Kharisma Bangsa Bilingual Boarding School Tangerang, won a gold medal in the program *International Environment Project Olympiad* in Istanbul Turkey in 2009, *Honourable Mention* in the program I-SWEEP (*International Sustainable World Energy, Engineering and Environment Project Olympiad*) in Texas United States in 2010. Likewise, state high school of SMAN 8 Pekanbaru, won Adiwiyata award from the Ministry of environment and several times been awarded on the environment.

These conditions motivated the author to study the school with the environmental concepts and the factors behind it so that can formulate strategies on the development of school with the environmental concepts to high school students.

Research Methods

The study has been conducted at high school Kharisma Bangsa Tangerang and state

high school of SMAN 8 Pekanbaru which began in November 2015 to March 2016. A survey was carried out by sampling of student to be respondent in the two schools. Secondary data were collected in the form of evidence, records or historical reports that have been compiled in the archives of both published and unpublished. Primary data may be the subject of opinion (vote) individually or in groups, on the observation of an object, event, and test results. The data obtained were tabulated and discussed descriptively.

To formulate the development strategy of environmental concept, a SWOT analysis, which consists of Strengths, Weaknesses, Opportunities and Threats were performed (Rangkuti, 2009). This method aims to identify the various internal and external factors systematically. The analysis technique used in processing the data include an evaluation matrix, SWOT matrix followed by *grand strategy* matrix. Illustration of SWOT analysis stages in this study, as shown in Figure 1.

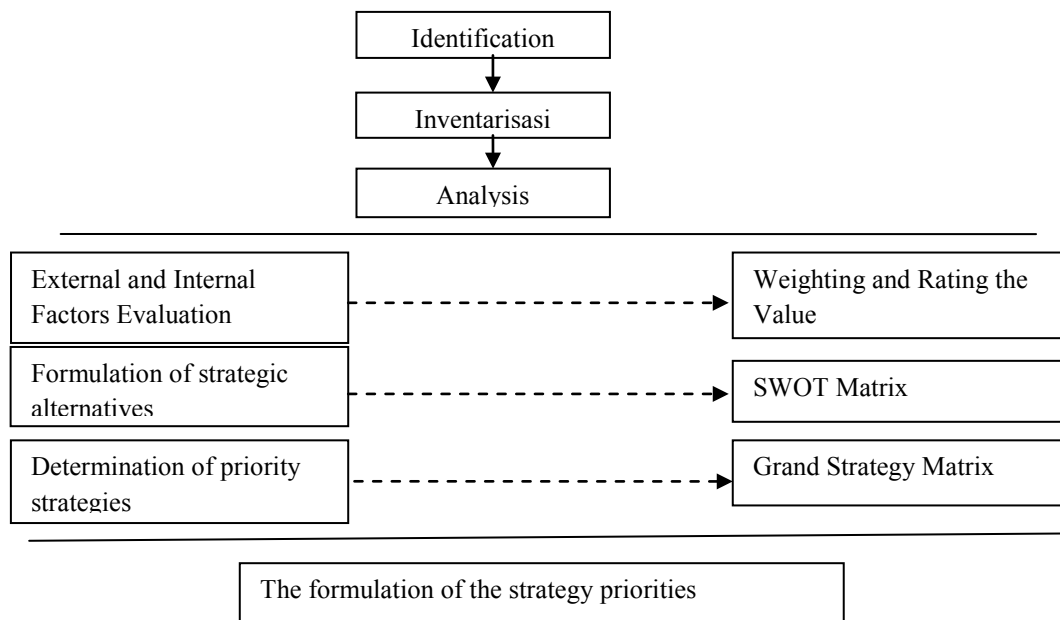


Figure 1. Stages Illustration of SWOT Analysis Formulation school with the environmental concepts Development Strategy

To determine the criteria for assessment of the value aspect, the weight and the rating on the SWOT elements in this study as shown in Table 1.

Table 1. Criteria for Assessment of Values Aspects, Weights and Rating on School with the Environmental Concepts SWOT Elements

No	Aspect	Valuation	Classification	Remarks	
Results And Discussion				1	Not Important
1.	Value	1 – 4	2	Quite important	
			3	Important	
			4	Very Important	
2.	Weight	0,01 – 0,20	0,01 – 0,05	Not Important	
			0,06 – 0,10	Quite important	
			0,11 – 0,15	Important	
			0,16 – 0,20	Very Important	
3.	Rating	1 – 3	1	Lower respond	
			2	Moderate respond	
			3	Higher respond	

Source: Adopted from Marhalim (2015)

Identification Internal and External Factors

The data and information collected were categorized into 14 variables of school with environmental concepts Table 2.

Table 2. Inventory of Internal and External Factors of SWOT elements School with Environmental concepts High school Kharisma Bangsa Tangerang and state high school 8 Pekanbaru

No.	Variable factors Internal/External	High school Kharisma Bangsa Tangerang				State high school 8 Pekanbaru			
		S	W	O	T	S	W	O	T
1.	Disposing waste in its place	√				√			
2.	WC/ Toilet Cleanliness	√				√			
3.	Class Cleanliness		√			√			
4.	School garden		√			√			
5.	School janitor	√					√		
6.	Electrical energy	√				√			
7.	Waste processing		√			√			
8.	Environmental Funds in school		√			√			
9.	Environmental education		√			√			
10.	Student's interest towards school			√				√	
11.	Sponsorship and supports			√					√
12.	Competition with other the schools				√				√
13.	Cooperation with the outside party				√			√	
14.	Green open space	√					√		

Source: Primery data (2016)

Evaluation of Internal and External Factors

After an inventory of internal and external factors of all elements of SWOT, further evaluation were done by providing value, weight and rating SWOT elements to each school (Table 1). The calculated value, weight and rating of elements for high school Kharisma Bangsa Tangerang shown in Table 3 and for state high school 8 Pekanbaru shown in Table 4.

After scoring, weighting and rating each of SWOT elements, formulating alternative strategies using SWOT matrix for each school were done. The strategies alternative formulation of school with environment concepts for high school Kharisma Bangsa Tangerang were shown in Table 5 and for state high school 8 Pekanbaru shown in Table 6.

Table 3. Calculation of Values, Weight and Rating of SWOT Elements school with environment concepts Kharisma Bangsa high school Tangerang

No.	Variable	value	weight	Rating	Score
Strength (S)					
1.	- Disposing waste in its place	3	0,18	2	1,08
	- WC/ Toilet Cleanliness	3	0,13	3	1,17
	- School janitor	4	0,18	2	1,44
	- Electrical energy	3	0,10	2	0,60
	- Green open space	3	0,11	2	0,66
Total					4,95
Weakness (W)					
2.	- Class Cleanliness	2	0,13	2	0,52
	- School garden	3	0,15	2	0,90
	- Waste processing	3	0,15	1	0,45
	- Environmental Fund	3	0,13	1	0,39
	- Environmental education	2	0,08	3	0,48
Total					2,74
Opportunities (O)					
3.	- Student's interest	3	0,16	3	1,44
	- Sponsorship and supports	3	0,13	2	0,78
Total					2,22
Threat (T)					
4.	- Competition with other schools	3	0,13	3	1,17
	- Cooperation with the outside party	3	0,13	1	0,39
Total					1,56

Source :Processed Data(2016)

Table 4. Calculation of Values, Weight and Rating of SWOT Elements School with environment concepts state high school 8 Pekanbaru

No.	Variable	Value	Weight	Rating	Score
Strength (S)					
1.	- Disposing waste in its place	3	0,15	3	1,35
	- WC/ Toilet Cleanliness	3	0,12	2	0,72
	- Electrical energy	3	0,15	2	0,90
	- Class Cleanliness	2	0,10	2	0,40
	- School garden	2	0,12	1	0,08
	- Waste processing	2	0,11	3	0,66
	- Environmental Funds	4	0,16	3	1,92
	- Environmental education	3	0,13	1	0,90
Total					6,93
Weakness (W)					
2.	- Green open space	3	0,14	3	1,26
	- School janitor	3	0,13	2	0,78
Total					2,04
Opportunities (O)					
3.	- Student's interest	4	0,18	3	2,16
	- Cooperation with the outside party	2	0,10	2	0,40
Total					2,56
Threat (T)					
4.	- Competition with other schools	4	0,18	2	0,48
	- Sponsorship and supports	1	0,01	3	0,03
Total					0,51

Source :Processed Data(2016)

Table5. SWOT matrix of school with environment conceptshigh school Kharisma Bangsa Tangerang

InternalFactors	ExternalFactors	Opportunities (O)	Threats (T)
Strengths (S) 1. Disposing waste in its place 2. WC/ Toilet Cleanliness 3. School janitor 4. Electrical energy 5. Green open space		1. Student's interest towards school 2. Sponsorship and supports <input type="checkbox"/> Develop students awareness through the support of parents (O1, S1, S2, S4, S5) <input type="checkbox"/> develop students awareness through support of schools (O2, S3)	1. Competition with other the schools 2. Cooperation with the outside party <input type="checkbox"/> Develop cooperation with other schools (T1,T2, S1, S2, S4)
Weakness (W) 1. Class Cleanliness 2. School garden 3. Waste processing 4. Environmental Funds 5. Environmental education		<input type="checkbox"/> Improvingenvironmental infrastructure in the school (O2, W5) <input type="checkbox"/> Develop student's knowledge of the environment (O1, W2, W3) <input type="checkbox"/> Developfunding sources for environmental activities (O2, W5)	<input type="checkbox"/> Implementing specific policies on the environment in school (T1, T2, W4, W5)

Table6. SWOT matrixschool with environment conceptsstate high school 8 Pekanbaru

InternalFactors	ExternalFactors	Opportunities (O)	Threats (T)
Strengths (S) 1. Disposing waste in its place 2. WC/ Toilet Cleanliness 3. Electrical energy 4. Class Cleanliness 5. School garden 6. Waste processing 7. Environmental Funds 8. Environmental education		1. Student's interest towards school 2. Cooperation with the outside party <input type="checkbox"/> Increase students awareness through the support of parents(O1, S1, S2, S4) <input type="checkbox"/> Developing environmental activities with the community (O2, S3, S5, S6, S7, S8)	1. Competition with other the schools 2. Sponsorship and supports <input type="checkbox"/> Develop cooperation with other schools (T1, S1, S2, S4,S8)
Weakness (W) 1. Green open space 2. School janitor		<input type="checkbox"/> Develop student's knowledge of the environment (O1, O2, W1, W2)	<input type="checkbox"/> Develop cooperation with the environmental foundation (T2, W1, W2)

Grand Strategy Matrix

Grand Strategy Matrix is positioning of strategy priorities that have been formulated through the SWOT matrix. Positioning is known through the coordinates obtained from

the difference between the sum of the value of internal factors (the strengths and weaknesses) and external factors (the opportunities and threats) which have been identified as shown in Table 7.

Table 7. Determination of the position coordinates priority strategies school with environment concepts for high School Students

No	Name of school	InternalFactorScore			ExsternalFactor Score			Coordinate
		S	W	S-W	O	T	O-T	
1.	High schoolKharisma Bangsa Tangerang	4,95	2,74	2,21	2,22	1,56	0,66	2,21 ; 0,66
2.	State high school 8Pekanbaru	6,93	2,04	4,89	2,56	0,51	2,05	4,89 ; 2,05

Source: DataAnalysis (2016)

Based on difference summation so thatdetermined the position of strategy coordinates, as shown in Figure 2.

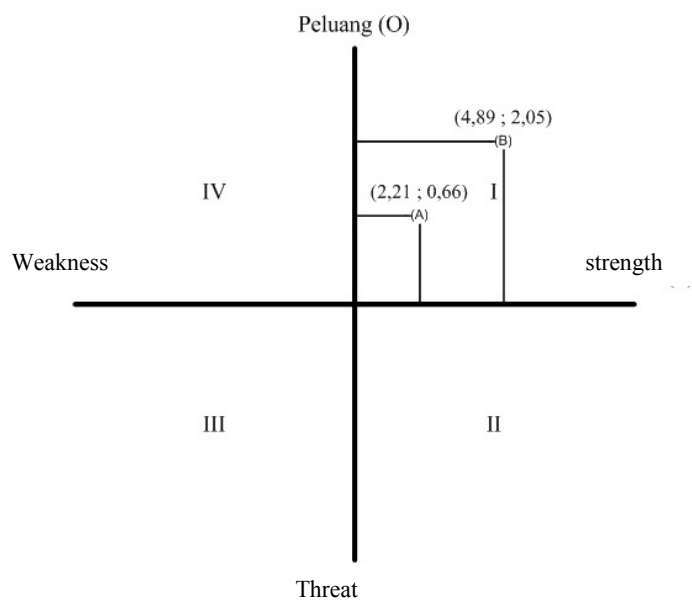


Figure2. Development Strategy position of school with environment concepts for High School Students (A) High School KharismaBangsaTangerang (B) State high school 8 Pekanbaru

Figure 2 showed that High school Kharisma Bangsa Tangerang and state high school 8 Pekanbaru is located in Quadrant I. The strategy should be done in accordance with Quadrant I was aggressive strategy (*Growth Oriented Strategy*) or also called S-O strategy (*Strength-Opportunities*) (Rangkuti, 2009), Quadrant I position is very advantageous because it has the power that can take advantage of existing opportunities.

Further analysis suggested that the development strategy both schools should implement the S-O strategy which is an aggressive strategy. For high school Kharisma Bangsa Tangerang, an aggressive strategy of school with environment concepts which selected from alternative strategies formulated through SWOT, include: (1) Develop awareness of students through the support of parents (2) Develop awareness of students through school support.

Aggressive strategies of school with environment concepts selected from alternative strategies formulated through the SWOT matrix for state high school 8 Pekanbaru, include:(1) Develop the awareness of students through parent support(2) Developing environmental activities with the community(3) Developing student awareness on environment through parents and school(4) Developing environment activities with the community. The above four strategies of school with environment concepts were derived from the analysis of two high schools in this study.

Conclusion

The development strategy of school with environment concepts for high school students is to develop and increase students awareness toward the environment through the support of parents and schools, and developing environmental activities with the community.

Acknowledgment

The author would like to thank to High School Kharisma Bangsa Tangerang and state high school 8 Pekanbaru who helped during the study. Further thanks are also extended to all those who helped this research became easier.

References

- Dalyono. 2005. The Influence of Interest and School Environment to Economics learning Achievement on students of high school Muhammadiyah Waru Class VIII Academic Year 2013/2014. University of Muhammadiyah. Surakarta.
- Kadir, Z., I, Bizzy., B Y Suprpto., Marwanin., H, Alian. 2013. Procedure socialization of Electrical Energy Saving Usage in Equipment And Room Management of Some Schools in Inderalaya Ogan Ilir. Journal of dedication Sriwijaya. Sriwijaya University.
- Ministry of Environment. 2009. Handbook 2010: Adiwiyata; Create School with Cultured and Environmental Caring. East Jakarta: Deputy Education and Environmental Communication Affairs, Deputy for Environmental Communication and Community Empowerment, the Ministry of Environment.
- Kusmiyati. 2013. 3 Standard Terms of Hygiene Toilet. www.health.liputan6.com. Visited in June 2016.
- Kusrini, T. 2015. The Behavior of littering by Society in the Kapuas River Bank, A Case Study in the Villages Bangka Belitung lautsub district of South East Pontianak. Socioloque Journal Volume 3 Number 3.
- Marhalim. 2014. Community Supervisory Empowerment Strategis In Mangrove Conservation in Bengkalis. Journal of Environmental Studies, 2 (2): 189-197.
- Nawasis. 2015. Guidelines for Spatial Planning around landfill waste. www.nawasis.com. Visited in December 2015
- Nor, IN A. 2009. Green Open Space. www.simpang mahar.Blogspot.co.id. Visited in June 2016.
- Raharja, H. 2006. Ecosystem Learning in the School garden. <http://researchengines.com>. Visited in June 2016.
- Rangkuti, F., 2009. SWOT Analysis Techniques Dissecting Business Case: Reorientation of Strategic Planning Concepts for the 21st Century sixteenth publication . Gramedia Pustaka Utama, Jakarta. 188 Page.
- Rianto, M. 2007. Pakem Classroom Management Model. Dirjen Pmptk. Jakarta.
- Slameto. 2010. Learning and Affecting Factors. Rineka Cipta. Jakarta.
- Sinaga, R. 2011. School Environmental Hygiene. www.Hendrariahdo.Workpress.Com. Visited in June 2016.
- Sudarwati. 2012. Environmental Education Policy Implementation State high school 11 Semarang Towards school of Adiwiyata. Universitas Diponegoro. Semarang.
- Sujarna. 2014. Analysis of Character Education In create awareness toward Environment for State vocational school 4 Pekanbaru. Journal of environmental science, 8 (1) : 51-71.

- Surakusumah, W. 2009. Concept of Environmental Education. www.es.scribd.com. Visited in April 2016
- Widiyaningrum, P. Lisdiana, E. Purwantoyo. 2015. Evaluation of Student Participation In Waste Management to Support Schools Program of Adiwiyata. Indonesian Journal Of Conservation Volume 04 (01).
- Wijaya. 2008. *Models of Learning*. PPPPTK. Yogyakarta.
- Wuryadi, 2009. Education for Building Nation and its character. Professor of State University of Yogyakarta. Yogyakarta.