The Effect Of Instructional Strategy And Knowledge About Environment And Cultural Responsibility Students On Preserving The Environment

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ABSTRAK

The objective of the research is to find out the effect of instructional strategy and knowledge about environment and cultural responsibility students on preserving the environment. The research is an experiment with a factoraial design 2x2. The results of the research are (1) there is a significant differences of the cultural responsibility students on preserving the environment between those who are given taught by the problem- based leraning instructional strategy and the inquiry instructional strategy (2) for student with high knowledge about environment, it was found that the cultural responsibility students on preserving the environment taught by the problem based learning instructional strategy is higher than the inquiry instructional strategy; (3) for the student with low knowledge about environment, it was found that the cultural responsibility students on preserving the environment taught by the problem based learning instructional strategy is higher than the inquiry instructional strategy; (4) there is any interaction between giving the instructional strategy and knowledge about environment.

Keywords : Instructional Strategy, Knowledge About Environment, Cultural Responsibility Students On PreservingThe Environment

INTRODUCTION

Environmental destruction will result in an environment change so that the environment will not support the human life properly. It is not overcome promptly, it will impact the human welfare. The present environmental destruction is owing to the exploitation of natural resources in order to fulfill the human need without considering the environmental protection. This environmental destruction has hampered natural processes, so that many natural functions have been degraded .The loss of natural habitat will be the most serious threat to a biological diversity in the number and diversity of a geniuses , types and ecosystem contributing to the loss of natural habitat.

Inquiry Learning Strategy

Inquiry learning strategy emphasizes on the process to look for and find . The learning materials are not delivered directly .The role of the students in this strategy is to look for and find the lesson material by themselves , whereas teachers act only as the facilitators and counselors of the students who study . Inquiry learning Strategy is a series of learning activities emphasizing critical and analytical thinking processes to look for and find the answer of a problem asked by themselves The thinking process itself is normally implemented through a discussion between the teachers and the students . This learning strategy is also called as heuristic strategy, deriving from a Greek word, *heuriskein* which means I discovered.

It is carried out via discussion between the teachers and students . This learning strategy is normally called as *heuristic* strategy , deriving from *a Greek word , that is heuriskein* which means I have discovered .

Knowledge of Environment

In essence, any problems on environment and human is problems closely related to the value system, custom , system and control of physical environment, biological environment and social environment . Therefore, any environmental problems may be overcome not only by making technical efforts , but also by educative and persuasive efforts . In this research the knowledge of environment is any information regarding any activities carried out by the students and community related to the utilization of the preservation and control of any physical, biological and social environment

To a certain extent, knowledge Is anything people know of an object directly and indirectly affects human life. As a whole, knowledge serves to respond and gives solution to either individual or group life problems. For students, knowledge will preserve the norms in rational fashion so that the students will keep maintaining

respectable attitude and behavior, particularly the responsibility to protect the environment in general and schools in particular.

Clean culture

Culture as usually defined as "the efforts of human " seems to be neutral and contains no religious value content. However, if we refer to such word deriving from its English word ,culture, composed of two words "cult" (a way to praise) and "lore" (custom), then we will be aware that in principle, any culture is a custom by which we praise God.

For instance, dressing culture. Before Islam came to Indonesia, the women here only wore scanty dresses that the dresses they wore just covered the part above their knees and below their navels To date on the left side of the road to Malang from Surabaya , we will see Ken Dedes statue partially clothed - except that the parts above her knees and below navel covered .

Responsibility in Protecting Environment

According to Myers," responsibility concerns social reciprocal norm referring to the principle of balance among the members and to be receptive in social relationship. Attitude to help somebody will depend on their condition . In the social responsibility theory it is defined that the intention to offer help maybe preceded by a sense of responsibility

Responsibility is defined by Baldwin , "as a consequence of an action that should be explicitly described regarding his/her choice , decision and actions. According to Cranno and Messe," a responsibility includes feeling and obligation to carry out what should be done well and properly . A responsibility will be moral strength playing the role in controlling either internal or external pressure of somebody in achieving what he wishes. . The context of a control in somebody's responsibility is based on three abilities , namely , to state a choice , make a decision and determine what should be carried out.

EXPERIMENTAL

The method adopted in this research is an experimental method . Due to a number of technical reasons, administrative procedure and consent ; then the experimental activity was conducted without rearranging the existing groups . The result of this research will confirm the position of the causal relationship among the variables to be studied. The aim achieved may be proved from the findings of the facts contributing to and facts as the consequences of the difference of the influence of the implementation of instructional learning strategy and inquiry learning strategy and naturalist intelligence of the students' knowledge about environmental protection .

The most appropriate research design is using factorial design . Due to the research hypothesis of an interaction hypothesis ; then the most appropriate design is factorial design . The most factorial design 2x2 , with a variant analysis technique (ANOVA). The learning strategy treatment Variable is classified as inquiry learning strategy , whereas naturalist intelligence Variable is classified as high naturalist intelligence and low naturalist intelligence

The design of the experiment may be seen in Table 1 as follows:

Table 1. Research design

variable of behavior / Attribute Variable		Learning strategy (A)	
		Problem-based learning (A_1)	Inquiry (A_2)
Clean Culture (B)	Height (B_1)	A_1B_1	A_2B_1
	Low (B_2)	A_1B_2	A_2B_2

Description :

A : Learning strategy

A_1 : *problem-based learning strategy*

A_2 :Inquiry Learning Strategy

B : Clean Culture

B_1 : High Clean Culture

B_2 : Low Clean Culture

A_1B_1 : The Group of students adopting *problem based-learning* strategy implementing clean culture

A_1B_2 : The group of students who adopt *problem based-learning strategy* having low clean culture .
A_2B_1 : The group of students adopting inquiry learning strategy having high clean culture.
A_2B_2 : The group of students adopting inquiry learning strategy having low clean culture

RESULTS AND DISCUSSION

Table 3.1: Description The date of the Students Behavior Scores having clean culture to the Environment with Knowledge of the environment in a Factorial Design 2 x 2

		Strategi Pembelajaran (A)			
		***Prpblem-based leaning* (1)**		**Inquiri (2)**	
Pengetahuan tentang budaya bersih (B)	**Tinggi (1)**	*n* =	11	*n* =	11
		$\bar{X}$ =	**64.818**	$\bar{X}$ =	**59.818**
		□X =	713	□X =	658
		$□X^2$ =	25289	$□X^2$ =	59818
		$□□X)^2$=	508369	$□□X)^2$=	432964
		s =	2.960	S =	2.316
		s^2 =	8.764	S^2 =	5.364
	Rendah (2)	*n* =	11	*n* =	11
		$\bar{X}$ =	**54.545**	$\bar{X}$ =	**51.909**
		□X =	600	□X =	571
		$□X^2$ =	15042	$□X^2$ =	16040
		$□□X)^2$=	360000	$□□X)^2$=	326041
		s =	2.067	s =	1.973
		s^2 =	4.273	s^2 =	3.891

Testing of Analysis Requirements

The Testing of analysis requirements comprise : (1) The Testing of Research sample data normality based on an assumption that normal population distributions is reflected from the normal sample distribution. (2) The testing of variant homogeneity as the requirement in carrying out a comparative analysis that the groups of score to be analyzed should have homogenous variants

Table 3.2 ANOVA

Source of Variation	**Db**	**JK**	**RJK**	**Fcount**	**Ftable**	
					□□=0,05	□□=0,01
Between the Columns	1	160.36	160.260	28.776**	4,08	7,31
Between the Lines	1	872.07	590.140	105.897**	4,08	7,31
Interaction	1	388.52	334.32	59.992**	4,08	7,31
In the Groups	40	222.91	5.57			
Total	43	1307.73				

Description :

Db = Degree of Freedom
JK = Total Squares
RJK = Average of Total Squares
** = Very significant
* = significant

Testing Criteria :

a. Regarding between the Columns , if Fcount >F_{table} ;then there is a significant as:
F_h = 28.776 and $F_t(\alpha=0.05)$=4.08 and $F_t(\alpha=0.01)$=7.31; then $F_h > F_t$
This means that there is a very significant difference between the environmental knowledge of the students who learn with inquiry learning strategy and the environmental knowledge of the students who learn with *problem based learning strategy*

b. Regarding between the lines , if Fcount >Ftable ;then there is a significant difference because :
F_h=105.897 and $F_t(0.05)$=4.08 and $F_t(0.01)$=7.31 ;then $F_h > F_t$
This means that there is a very significant difference between the environmental knowledge of the students who have knowledge of high clean culture and low clean culture who learn with inquiry strategy and *problem based learning* strategy

c. Regarding the Interaction , if F^{count} >F_{table} ;then there is a significant interaction as
F_h= 59.992 and $F_t(0.05)$=4.08 and $F_t(0.01)$=7.31;then $F_h > F_t$
This means that there is an interaction between the learning strategy and knowledge about clean culture in respect of the behavior of the students having knowledge on environment

Table 3.3 : The difference of the Behavior of the students having knowledge of environment who learn with Inquiry Learning Strategy *Problem based learning Strategy*

Learning Strategy	*Inquiry*	*Problem based learning*	Q count	Q table	
				α=0,05	α=0,01
			7.59	3,96	5,02
Average	59.682	55.864			
Average Square In	0.503				
DK	21				

The result of the calculation as presented in the above may be seen as Q^{count} >Q^{table} (7.590>5.02).Ho is refused and H1 is accepted . This means that there was a significant difference between the group of students who learned with inquiry learning strategy and the group of students who learned with *problem based learning* strategy.

The result of the hypothetical test indicates that the four zero hypothesis were refused, but othe other hand the research hypothesis proposed was accepted. This is evident from the value of Fcount bigger than the value of Ftabel, in the level of significance α = 0,05.

The hypothesis proposed was 1) On the whole , the inquiry learning strategy and *problem based learning* strategy are different in the behavior of the students having knowledge of environment 2) The behavior of the students having knowledge of high clean culture who learn with inquiry learning strategy is higher than ten behavior of the students who learn with *problem based learning* strategy 3) The behavior of the students with knowledge of low clean culture is better through *inquiry rather* than through *problem based learning* strategy *4)* There is an influence of the interaction between *inquiry* learning strategy */problem based learning* and the knowledge about clean culture in respect of the students' knowledge of environment.

On the whole ,*inquiry* learning strategy and *problem based learning strategy* are different from the behavior of the students having knowledge about environment (A1 and A2)

The result of the first hypothesis test indicates that there is a significant difference between the behavior of the students having knowledge of environment with inquiry learning strategy and the behavior of the students having knowledge of environment with *problem based learning* strategy. This is proved in table 4.14 , that on the whole it is obvious that the average score of the behavior of the students having knowledge on environment who learn with inquiry learning strategy is higher , that is 59.682 and the score of the behavior of the students having knowledge on environment who learn with *problem based learning* strategy is 55.864. $Q^{count} > Q_{table}$ (7.590 >5.62). Ho was refused and H1 was accepted . It means that there is a significant difference between the students who learned with inquiry learning strategy and the students who learned with *problem based learning* strategy.

CONCLUSION

Based on the outcome of the hypothesis and the discussion previously set out , the findings and conclusions of the research are as follows:

Firstly , the behavior of the students who learn using *inquiri* strategy is different from that of the students learning using *problem based learning* strategy . The behavior of the students who learned using the *inquiry* strategy is higher than the behavior of the students who learn using *problem based learning* strategy .

Secondly , the behavior of the students who have knowledge on the environment , and who have knowledge on high clean culture by learning using inquiry strategy is higher than the behavior of the students learning using *problem based learning* strategy

Thirdly , the behavior of the students who have knowledge of the environment and clean culture who learn using an inquiry strategy is higher than the behavior of the students who learn using *problem based learning* strategy

Fourthly, there is an interaction between the learning strategy and the level of the knowledge on the clean culture in affecting the behavior of the students with environmental insight

A learning strategy carries a different influence on every level of knowledge about clean culture

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