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INTRODUCING A CONSERVATION-BASED LEARNING MODEL TO BUILD STUDENT CREATIVITY THROUGH CONSERVATION VALUES AS AN EFFORT TO PRESERVE BIODIVERSITY IN SDG'S

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ABSTRACT

Objective: This study aims to determine the implementation of the Conservation-Based Learning (CBL) model and its effect on creative behaviour through conservation values obtained by students through learning.

Theoretical Framework: The CBL model is built on the premise that addressing the negative impacts of biodiversity loss requires behaviour change. While behaviour must be built through knowledge that fosters values. A learning model that is able to build Conservation Values (CV) and Conservation Behaviour (CB) will have a significant role in conserving biodiversity as specified in the SDG's.

Method: The research involved 127 secondary school students used SmartPLS and PLS-Graph version 3.0 to analyse the relationships and effects of two syntaxes in the CBL model: Value Clarification (VC) and Systematic Action Planning (SAP). These syntaxes were tested for their impact on developing students' Conservation Values CV and Conservation Behaviour CB.

Result and Discussion: The findings reveal that all variables examined in the study, including CV, CB, VC, and SAP, have positive and significant relationships. The implementation of the CBL model successfully enhances students' understanding of biodiversity and conservation values while promoting actionable conservation behaviour.

Research Implication: The application of CBL model in learning successfully builds students' values and creative conservation behaviour. This has important implications for efforts to conserve biodiversity through the younger generation as expected in the SDG's.

Originality/Value: This research introduces a new approach to achieve the SDG’s in conserving biodiversity (SDG-14, SDG-15) through quality education (SDG's-4). The CBL model has the potential to build the conservation values and behaviours of future generations.

Keywords: conservation based learning model, value clarification, systematic action plan, conservation values, creative behavior, Sustainable Development Goals (SDGs).

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1 INTRODUCTION

Biodiversity conservation is on the agenda of SDG's 14 (life below water) and SDG's 15 (life on land) as an integral part of the environmental SDG's pillar (Obrecht., etal. 2021). Conservation is a central issue in climate change and the threat of biodiversity destruction (Dube Kaitano, 2024; UN, 2014). The conservation and sustainable use of biodiversity for human welfare is increasingly threatened (Bube Kaitano, 2024; Morris *et al*., 2016; Pretty *et al*., 2010). The highest conservation threat occurs in tropical regions, but damage in the Southeast Asia region is the highest (J.L. Coleman *et al*. 2019; Barlow *et al*., 2018; Hughes, 2017; Sodhi *et al*., 2010). Climate change cannot be separated from biodiversity (Ketil Skogen *et al*, 2018; CBD, 2009).

Biodiversity is one of the greatest riches for human life (Rojalin. 2023), however, climate change has become a widespread global threat and continues to grow in its impact on biodiversity and ecosystems (Díaz *et al*., 2019), and can exacerbate the impacts of other stresses, including habitat fragmentation and loss due to overexploitation, invasive alien species, and pollution (CBD, 2009; Bube Kaitano, 2024). The threats of climate change and loss of biodiversity are considered the two most serious environmental threats facing humans (Ketil Skogen, 2018). This condition is described as the largest and most complex global environmental problem currently facing humanity (Brechin, 2010; IPPC, 2014).

The biggest cause of climate change and loss of biodiversity is due to human activities caused by various worries and anxieties of mankind (Massarella and Fletchera, 2022), especially among conservationists (IPBES 2019; Wyborn *et al*. 2020). Meanwhile, current conservation initiatives often do not address the right issues, ignore many things and fail to align with sustainable development goals (Nana *et al*. 2022).

Human behavior as the biggest component contributing to climate change and biodiversity destruction must be responsible for making improvements (Ulbrich and Benedict, 2010). The need to raise awareness is imperative (Severo, E. A. Guimarães. 2022). The big effort that is hoped to improve this situation is through education, and this is not possible without involving teachers (UNESCO, 2021). On the other hand, Environmental education has failed to bring about the changes in attitudes and behavior necessary to prevent the harms of climate change, loss of biodiversity, and environmental degradation (Charles S and Daniel T Blumstein, 2011). Research result UNESCO (2021) said that 40% of teachers have the confidence to teach the cognitive dimension of climate change, but only 20% can explain well how to take action. Meanwhile, conservation activities to change will not work if there is no behavior built from learning activities, training and the like (UNESCO, 2021).

Building behavior in learning has been widely done, but building conservation behavior uses expert grids (Kollmus,A & Agyeman. 2002) to involve existing values in society has not been done (Pascual, 2023). To date, public behavior has largely been due to prioritizing part of natural values (market, individual, short-term instrumental values; (Pascual *et al*. 2023), even to the expense of indigenous peoples and local communities (IPBES 2022). Sustainability education is one way to change and even improve and even change students' values so that sustainable awareness, beliefs, attitudes and behaviors can be adopted (Stefani, S. R., etal. 2024).

Responding to this situation, Sukarsono (2020) seeks to create and develop a conservation learning model that can encourage students to explore conservation values, both natural, economic, cultural and spiritual, to serve as a basis for carrying out conservation actions.

This model has been introduced since 2019 and development tests have been carried out starting from the Malang Regency and City level to East Java Province in Indonesia. The results of the development of this model have received recognition for Intellectual Property Rights from the Ministry of Law and Human Rights of the Republic of Indonesia, Certificate Number: o00170765. One of the differences between this model and other learning models is the special syntax or steps, namely the clarification or_integration of values and follow-up (Sukarsono, 2020; Sukarsono, 2019; Sukarsono, 2018).

The syntax of value clarification or integration expects teachers to be able to guide students to discover the values that exist within themselves to develop (Sukarsono, 2020). Various techniques for exploring values can be used, including using the Value Clarification Technique (VCT) (Nunuk Suryani, 2010). It is hoped that the values that are explored and developed will not only be values related to nature conservation (ecology, economy, social, beauty, health), but also spiritual values (Sukarsono, 2018, 2019, 2020; Nilasari S *et al*, 2023; Syed Haider A, 2023).

This study aims to: 1) determine the implementation of the CBL model by teachers, and 2) determine the relationship between the influence of unobserved latent factors of the CBL model, namely value clarification (VC) and systematic action plan (SAP) on students' creative behaviour (CB) through students' conservation value (CV).

2 LITERATURE REVIEW

2.1 CONSERVATION-BASED LEARNING MODEL

Environmental learning in Indonesian schools is often only handed over to certain teachers whose subjects are considered most related to the environment (Siti Nurhasanah, 2020) Report UNESCO (2021) states that the number of teachers who understand and teach sustainable development is only 20%.

Syntax of the Conservation Based Learning model (Sukarsono, 2020) in sequence as follows: 1) Material strengthening; 2) Integration or Clarification of Conservation Values; 3) Identify the problem; 4) Problem formulation; 5) Systematic Action Plan; 6) Follow up and evaluation. Steps number 1, 3, 4, and 6 are often found in various learning models. Meanwhile, the syntax for integration or value clarification in learning is usually still a method or technique, for example the Value Clarification Technique (VCT) which is not yet included in the learning model syntax (Sukarsono, 2020). It is hoped that the values that are explored and developed will not only be values related to nature conservation (ecology, economy, social, beauty, health), but also spiritual values (Sukarsono, 2018, 2019, 2020; Nilasari S *et al*, 2023; Syed Haider A, 2023).

Meanwhile, the Systematic Action Plan (SAP) stage has similarities to problem solving methods in other learning models. The CBL model emphasises this step based on the problems or interests of individual students or groups, rather than problems generally prepared by the teacher. This SAP syntax is an effort to condition students to have planning in action, so that the actions taken are directed and rational (Kollmuss, A., & Agyeman, J. 2002; Hasan Mustafa, 2011).

2.2 THE VALUE OF BUILDING CONSERVATION BEHAVIOR

Environmentally friendly behavior that arises in a person or group of people can be explained using the sociological and psychological approaches proposed by Fietkau and Kessel (Anja Kollmuss & Julian Agyeman, 2002). This model consists of five variables that will influence the behavior of a person or group of people, either directly or indirectly. One of the variables that really determines is the value that a person has. Based on these values, a person will take pro-environmental actions (Anja Kollmuss & Julian Agyeman, 2002). A person's values will be stronger if they are supported by the opportunity to act ecologically, there is an incentive to behave, and they have the knowledge to act.

It is hoped that the values that are explored and developed in students are not just intrinsic and instrumental values that are assessed using biophysical and monetary indicators (Anderson dkk. 2022, Murali *et al*. 2024), but also Spiritual values (Syed Haider, 2023; Nilasari Siagian, 2023). Some experts call or group these values as "more-than-human" values (Barret,M.J. 2017). It is intended to combine various natural values to achieve more equitable and sustainable conservation outcomes (UN 2015, CBD 2022, IPBES 2022).

2.3 SYSTEMATIC ACTION PLAN BUILDING BEHAVIOR

Systematic Action Planning is determined by Sukarsono (2019) to build planned behavior as the theory put forward by Fishbein and Ajzen in 1991 (Kollmuss, A., & Agyeman, J. 2002). This theory is an extension of the Theory of Reasoned Action, which is used to predict behavior from attitudes as well as explain which processes are interrelated. This behavior emphasizes the importance of the intention to carry out a certain behavior. This theory has been widely applied to cases related to the environment, for example water conservation, green consumers, water treatment (Hasan Mustafa, 2011).

Considering that planned behavior involves more brain (cognitive) work, the application of this model syntax also refers more to behavioral theory from a positive perspective than to a behavioral perspective. This behavior is applied in the form of habituation to thinking about conservation (Sukarsono, 2019).

The cognitive perspective also explains that a person must choose which behavior to carry out. Considering that students have been given understanding and have values first, they will choose alternative behavior that will bring the greatest benefit to those concerned (Kollmuss, A., & Agyeman, J. 2002; Hasan Mustafa, 2011).

3 METHOD

This research is a quantitative explanatory with the aim to finding out the implementation of CBL model learning and knowing the relationship between the influence of unobserved latent factors from the CBL model, namely Valur Clarification (VC) and Systematic action plan (SAP) with creative behavior (CB) through Conservation value (CV). This factor is primary data collected through survey techniques created by researchers using a Likert's scale consisting of 5 question points. The population of this study were junior high school students in the city and district of Malang. Each city and district sampled one public and private school. Thus there are 4 schools with a total of 127 students.

3.1 DATA COLLECTION TECHNIQUES AND VARIABLES

Data collection regarding learning implementation was carried out through observation of model teachers by the research team in 4 sample schools. Model teachers have been trained and participated in CBL learning model workshops. Data collection was carried out by observing and filling in an observation sheet that had been validated to provide an assessment at each learning stage by filling in a 5-point Ordinal scale checklist for each learning stage. The results of data collection regarding learning implementation are processed using averaging techniques to determine whether learning activities have been carried out well or not.

Data regarding latent variables that cannot be measured directly are measured against the indicators of each variable as stated in Table 1.

Table 1.

Variables and Indicators

Variables and literature	Definition	Indicators
Value Clarification (VC). Literature: Nunuk S, (2010)	Techniques used to determine students' grades, select and assign them	Identify Values Reason for selecting values Determination/conclusion
Systematic Action Plan (SAP) Literature: Arnold Ross D. & Jon P. Wade (2015)	Planning actions to solve problems systematically according to the creative problems found.	Identification of problems Formulate the problem Problem solving ideas Steps to solve the problem
Conservation Value (CV) Literature: Capmourteres, V., and M. Anand (2016); Sukarsono (2018)	Natural and spiritual conservation values are owned and conveyed by students	Ecological value Economic, social and cultural values Aesthetic and Health Value Spiritual Values
Creative Behaviour (CB) Literature: Nilsson, Peter (2011)	The level of creativity of behavior designed and carried out by students both individually and in groups	Imitation Variation Combination Transformation

3.2 DATA ANALYSIS

Analysis of data on the implementation of learning activities using the CBL model was carried out by assessing the average interval value of all model teachers. The average results show the implementation of the model in learning (Ferdinand Maruti Patil-Nikam. 2007; Hety Mashita *et al*, 2024).

Meanwhile, to determine the effect of Value Clarification (VC) and Systematic Action Plan (SAP) on Creative Behaviour (CB) through Conservation Value (CV) as an intervening variable, path diagram analysis was used. While the data processing method uses Partial Least Square (PLS). In this study, VC, SAP, CB, and CV variables were formed using reflexive type indicators (the direction of the arrow from the latent variable to the construct).

The PLS software used in this study is smartPLS version 3.0, and for further data analysis, the PLS-Graph software version 3.0 developed by Chin (1998) is used. PLS is an alternative approach that shifts from covariance-based SEM to variance-based. Covariance SEM generally tests causation or theory while PLS is more predictive (Ghozali. 2006). PLS does not require certain distribution assumptions on parameter estimates, so there is no need for parametric techniques to test parameter significance (Chin, 1998).

SEM is used to analyse the relationship between independent and dependent variables simultaneously. Whereas PLS is used to minimize variance and make predictions. (Cucato, J. *et al*. 2022). PLS evaluation is carried out using predictive measurements that are non-parametric. Measurement of the effect of exogenous variables on endogenous variables must meet the requirement that the model go through testing the measurement model (outer model) and structural model (inner model).

Reflexive outer model indicators are evaluated using convergent validity, discriminant validity and composite reliability for indicator blocks. Convergent validity is determined by the outer loading and Average Variance Extracted (AVR) values. For exploratory research, the AVE value is 0.5 to 0.6 (Chin, 1996; Pirouz, 2006). Reliability is calculated using composite (construct) reliability with a cut-off value for exploratory research of 0.5 - 0.6 (Ferdinand, 2002: 192).

Apart from that, analysis was also carried out on Goodness of Fit (GoF) to measure the magnitude of the influence of Value Clarification (VC) and Systematic Action Plan (SAP) on Creative Behavior (CB) through Conservation Value (CV) as an intervening variable. Goodness of fit model measured using R-square dependent latent variable with the same interpretation as regression Q-square predictive relevance for structural models, it measures how well the observed values are generated by the model and also its parameter estimates.

4 RESULT AND DISCUSSION

4.1 IMPLEMENTATION OF THE CBL MODEL

The results of the observer's assessment of the implementation of learning using the CBL model can be seen in table 2.

Table 2.

Observation Results of the Implementation of the CBL Model

Syntax of Conservation Based Learning Model	Teachers				Average	Category
	1	2	3	4		
1. Introduction and reinforcement	5	5	4	5	4.75	Very well implemented
2. Values Clarification	4	4	4	5	4.25	Well implemented
3. Problem Statement	4	5	4	5	4.50	Very well implemented
4. Problem Solutions	4	5	4	4	4.25	Well implemented
5. Systematic Action Plan	4	4	4	4	4.00	Well implemented
6. Follow-up and Evaluation	4	4	4	4	4.00	Well implemented

Based on the observations in table 2, it can be concluded that the implementation of learning activities using the conservation-based learning model is carried out in the good to very good category, although there is no perfect score (5.00). This value illustrates that the model teacher has implemented the syntax of the CBL learning model well, including the syntax which is considered crucial in the model, namely the value clarification (CV) stage and the systematic action plan (SAP) stage. Based on these results, the analysis of the effect of applying the model for CV and SAP syntax can be continued.

4.2 THE EFFECT OF VC AND SAP IN THE CBL MODEL ON CB THROUGH CV

4.2.1 Measurement Model Testing (*Outer Model*)

Testing of the Measurement Model (Outer Model) is carried out through testing Convergent Validity, Determinant Validity and Reliability (Ghozali, 2006). Measurement model or outer model This is done to show the role of indicators in reflecting the variables formed or showing the relationship between variables and indicators or the same as the loading factor of each indicator on the variable (Suryawardani, 2018). Testing of the Measurement Model will be carried out by calculating the loading factor value for each indicator of each variable. The highest outer model value for each variable can be interpreted as the indicator that best represents the constituent variable. The significance value of this relationship was obtained through bootstrapping from 500 sub-samples and 5% significance. The measurement results for each loading factor for each variable are shown in Table 3.

Table 3.

Values *Outer Loading* Each Variable

	Loading factor	P Values
X1.1 <- Value Clarification (VC)	0.809	0.000
X1.2 <- Value Clarification (VC)	0.822	0.000
X1.3 <- Value Clarification (VC)	0.759	0.000
X1.4 <- Value Clarification (VC)	0.813	0.000
X2.1 <- Systematic Action Plan (SAP)	0.844	0.000
X2.2 <- Systematic Action Plan (SAP)	0.828	0.000
X2.3 <- Systematic Action Plan (SAP)	0.786	0.000
X2.4 <- Systematic Action Plan (SAP)	0.880	0.000
Z1.1 <- Conservation Value (CV)	0.788	0.000
Z1.2 <- Conservation Value (CV)	0.746	0.000
Z1.3 <- Conservation Value (CV)	0.795	0.000
Z1.4 <- Conservation Value (CV)	0.730	0.000
Y1.1 <- Creative Behaviour (CB)	0.804	0.000
Y1.2 <- Creative Behaviour (CB)	0.875	0.000
Y1.3 <- Creative Behaviour (CB)	0.849	0.000
Y1.4 <- Creative Behaviour (CB)	0.714	0.000

A reflexive indicator is considered to have a correlation with the variable being measured if it has a loading factor coefficient> 0.7 (Ghozali, 2014). Meanwhile, Sarwono (2015) states that outer loading of 0.6 is considered sufficient. The VC variable, SAP variable, CV variable, and CB variable have an outer loading greater than 0.7 with a p value <0.05, so it can be concluded that the 4 indicators of all these variables meet convergent validity, meaning that they are declared good in measuring each variable.

A discriminant validity test is used to see whether an indicator of a particular latent variable is different from indicators of other latent variables. In other words, the indicator is considered feasible to explain the latent variable. Discriminant validity testing compares the value with AVE (average variance extracted). An indicator is considered to fulfill convergent validity if the AVE value is greater than 0.5. The results of the calculation of the AVE value for each variable are as follows: VC of 0.642, SAP of 0.698. CV is 0.585, and CB is 0.660.

Based on the results of these calculations, it shows that the AVE value for each construct is greater than 0.5, so it can be concluded that the VC, SAP, CV, and CB constructs are good models, all constructs in the model meet the discriminant validity criteria.

The next outer model test is composite reliability testing. Composite reliability tests the reliability value between indicator blocks of the constructs that form them. A construct is declared reliable if the composite reliability value is> 0.7.

Based on the calculation results, value *Composite reliability* for the VC variable it is 0.877, SAP is 0.902, CV is 0.849, and CB is 0.885. Mark *Composite reliability* the 4 constructs in the model are all greater than 0.70, thus the measurement model or *outer model* with *reflexive indicator* has a very high level of validation. The indicators from VC, SAP, CV, CB, really reinforce each other's latent variables or are true -really able to measure the latent variable.

4.2.2 Structural Model Testing (*Inner Model)*

Structural model evaluation for the dependent constructs (CV and CB) was conducted using R-square (R^2). The R-square value obtained reflects the predictive power of the entire model (Falk and Miller, 1992; Pirouz, 2006) with the limit of the R-square value> 0.10 or> 10% or goodness-fit of the model. Based on the results of data processing with PLS, the coefficient of determination (R-square) value for CV is 0.757 and for CB is 0.659, respectively.

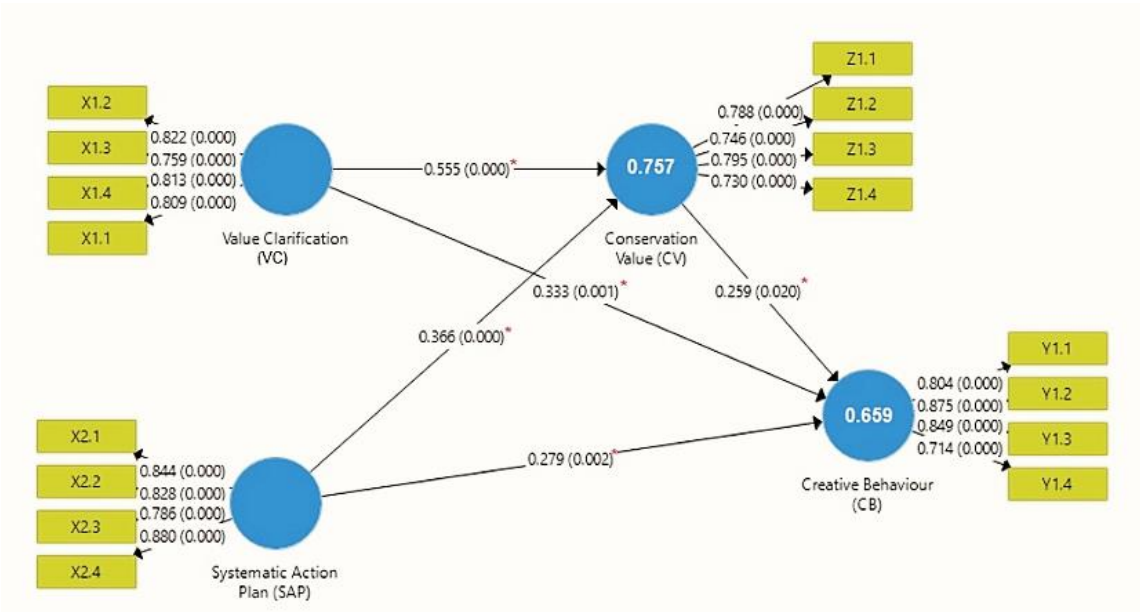
Based on the results of these calculations, the CV value of 0.757 indicates that CV is influenced by VC and SAP by 75.7% and 24.3% is influenced by other factors. The size of the R-square value for the variable CB is 0.659, which means CB is influenced by VC, SAP, and CV, amounting to 65.9%. Meanwhile, the other 34.1% was influenced by other factors. The VC and SAP variables are independent variables that influence the dependent variable, so they do not have an R square.

Goodness of fit in PLS it can be known from the Q value^2. Q value^2 has the same meaning as the coefficient of determination (R-*square*/R^2) in regression analysis. The higher R^2, then the model can be said to be more fit to the data. If the Q value-Square $^2 > 0$, It indicates that the model has *predictive relevance* (Imam Ghozali, 2006). Using the calculations result above, the Q value^2 can be seen^2 as follows:

Q value^2 = 1 – (1 – *R21*) (1-R22) (1 – R23)... (1 – R2n) (1)
= 1- (1-0.757) (1-0.659)
= 1- 0.0830 = 0.9170 = 91.7%

Q-value^2 produced on the model equation *overall* is 91.7%, which means the value is very high. It's mean that the structural model has *predictive relevance* very high. This model is getting better and is suitable for use in predictions. Based on the results of the bootstrap calculation process 500 times, the output of the structural model (inner model) can be seen in the figure 1.

Figure 1.
Path diagram (path analysis) for PLS output results



4.2.3 Direct and indirect influence of exogenous variables on endogenous variables

This direct influence shows the magnitude of the direct influence of exogenous variables on endogenous variables without involving mediating variables.

Table 4.

Direct effects

Variables	Koefisien path direct effect	P Values
Conservation Value (CV) -> Creative Behaviour (CB)	0.259	0.020
Systematic Action Plan (SAP) -> Conservation Value (CV)	0.366	0.000
Systematic Action Plan (SAP) -> Creative Behaviour (CB)	0.279	0.002
Value Clarification (VC) -> Conservation Value (CV)	0.555	0.000
Value Clarification (VC) -> Creative Behaviour (CB)	0.333	0.001

Estimation results *inner* the model for the direct influence between CV on CB shows a p-value of 0.020, where this value is smaller than alpha 0.05, so it can be concluded that there is a direct influence (*direct effect*) which significant positively between CV and CB of 0.259. In other words the better CV, the greater CB. Conversely, the less CV, the lower CB.

Estimation results *inner* the model for the direct influence between SAP on CV shows a p-value of 0.000, where this value is smaller than alpha 0.05, so it can be concluded that there is a direct influence (*direct effect*) Which significant positively between the SAP and CV of 0.366. In other words, the better SAP, the greater CV. Conversely, the less SAP, the lower CV.

Estimation results *inner* the model for the direct influence between SAP on CB shows a p-value of 0.002, where this value is smaller than alpha 0.05, so it can be concluded that there is a direct influence (*direct effect*) which significant positively between SAP and CB of 0.279. In other words, the better SAP, the greater CB. Conversely, the less SAP, the lower CB.

Estimation results *inner* the model for the direct influence between VC on CV shows a p-value of 0.000, where this value is smaller than alpha 0.05, so it can be concluded that there is a direct influence (*direct effect*) which significant positively between VC and CV of 0.555. In other words,_the greater CV. Conversely, the less SAP, the lower CV.

Estimation results *inner* the model for the direct influence between VC on CB shows a p-value of 0.001, where this value is smaller than alpha 0.05, so it can be concluded that there is a direct influence (*direct effect*) which significant positively between VC and CB of 0.333. In other words, the better SAP, the greater CB. Conversely, the less SAP, the lower CB.

Indirect influence shows the magnitude of the direct influence of exogenous variables on endogenous variables through mediating variables.

Table 5.

Indirect effects (Specific Indirect Effects)

	indirect effect Path Coefficient	P Values
Systematic Action Plan (SAP) -> Conservation Value (CV) -> Creative Behaviour (CB)	0.095	0.032
Value Clarification (VC) -> Conservation Value (CV) -> Creative Behaviour (CB)	0.143	0.043

The path coefficient value for the indirect influence between SAP through CV as an intervening on CB is 0.095, indicating a p-value of 0.032 which is smaller than 0.05, so it can be concluded that the indirect influence between SAP through CV as an intervention towards CB is significant. In other words, the better SAP, the more influence and increasing CV. So that by increasing CV it will increase CB. Conversely, the less SAP, the more it will affect the reduction in CV, so that by decreasing CV will also reduce CB.

The path coefficient value for the indirect influence between VC through CV as intervening on CB is 0.143, indicating a p-value of 0.043 which is smaller than 0.05, so it can be concluded that the indirect influence between VC through CV as an intervention towards CB is significant. In other words, the better VC, the more it will influence the increase in CV, so by increasing CV it will increase CB. Vice versa, the less of–VC, the more reduction in CV, so that by decreasing CV will also reduce CB.

5 CONCLUSION

The Conservation-Based Learning Model was successfully implemented by the model teacher according to the specified learning syntax. These results are convincing to test the influence of the value clarification (VC) and Systematic Action Planning (SAP) learning syntax on creative behavior (CB) through the acquisition of conservation values (CV).

The results of the statistical analysis show that the Value Clarification (VC) and Systematic Action Planning (SAP) stages have an influence on Creative Behavior (CB) through Conservation Values (VC). The relationship between Value Clarification (VC) and Systematic Action Planning (SAP) on Conservation Values (CV) and Creative Behavior (CB) is positive. This shows that Value Clarification (VC) and Systematic Action Planning (SAP) have a positive effect on Conservation Values (VC) and Creative Behavior (CB). The better the Value Clarification (VC) and Systematic Action Planning (SAP), the better the Conservation Values (CV) and Creative Behavior (CB). Conservation Values (CV) have a direct positive effect on Creative Behavior (CB).

The indirect relationship between Value Clarification (VC) and Systematic Action Planning (SAP) on Creative Behavior (CB) through Conservation Value (CV) is proven to be significant. This shows that if Value Clarification (VC) and Systematic Action Planning (SAP) are getting better, it will lead to better Conservation values (CV) which will ultimately affect Conservation Behavior (CB) to be better. Likewise, if there is a decrease in Value Clarification (VC) and Strategic Action Planning (SAP) techniques, it will decrease the acquisition of Conservation values (CV) and Creative Behavior (CB).

The results of this study still require broader evidence to be applied to different levels of students and college at different topics or subjects, so that a more comprehensive picture of efforts will be obtained in fostering increasingly creative conservation values and behaviours in accordance with the SDG's targets.

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