

HOW STUDENTS PERCEIVE THEIR ATTITUDES TOWARDS THE ENVIRONMENT

Udan Kusmawan (udan@ecampus.ut.ac.id)

Math & Science Education Department, FKIP, Universitas Terbuka, 15418, Indonesia

KEYWORDS: Student attitudes, the environment, science classroom

BACKGROUND

This paper discusses results of research investigating student ecological affinity. 'Ecological Affinity' was defined as the 'perceived distance' between students' demand on the environment to fulfil their desired lifestyles and the existence of the natural environment. The term 'perceived distance' referred to personal position on a negative-positive attitudinal continuum with regard to environmental sustainability. This study believed ecological affinity dealt with a person's right to draw a better quality of life from their interactions with the environment, and their responsibility to guarantee other people's rights in their efforts to gain the best sustainable quality of life.

AIM

This study aimed at examining students' perceptions concerning their environmental attitudes before and after attending a session in a science classroom, and in different locations.

DESIGN AND METHODS

It was recognised that the advancement of science had various impacts on human lifestyles and the environment. To measure its impacts on human attitudes, this study applied an environmental attitudinal scale instrument containing three sub-scales. The first sub-scale was concerned with students valuing the advancement of science and technology. The two other sub-scales dealt with student recognition of the limits of growth and their views of people dominating Nature. This study placed these sub-scales together into the Ecological Affinity Likert Scale.

This study worked on descriptive quantitative data based on instrument surveys. Surveys were administered in two phases, before and after science classrooms. Each phase of the survey was conducted in rural and urban cities. This study assumed student responses were a function of their perceptions of the impact of economic development and technological advancement on the environment, and their understanding of representing issues learned in their classroom. Descriptive analyses were carried out to measure central tendencies, variability, and relationships between groups of respondents. This study restructured the 5 response Likert scale into three continuing levels; 'negative' (scale=1), 'moderate (2)' and positive (3) positions.

RESULTS

This study demonstrated student attitudes were generally around the moderate position ($M=2.26$, $SD=0.32$). After attending a science classroom, their attitudes moved into a more positive position ($M=2.37$, $SD=0.21$). A paired-sample T-test showed different perceptions between rural and urban students. Urban students' perception changed significantly into a more moderate position after attending a science classroom ($M=[1.93 - 2.19]$, $N=61$, $df=60$, $t=-16.840$, $p=0.000$). A different situation existed with rural students where no significant differences were found between before or after attending a science classroom ($M=[2.48 - 2.49]$, $N=86$, $df=85$, $t=-0.610$, $p=0.543$). A similar contradictory situation appeared in all sub-scales between rural and urban students' attitudes. An exceptional situation, however, appeared in rural students' perception on People Dominating Nature where attending a science classroom changed their perception into a more positive position ($M=[2.27 - 2.48]$, $N=86$, $df=85$, $t=-7.294$, $p=0.000$).

CONCLUSION

It was evident that attending a science classroom had different effects in rural and urban students. Urban students were likely to perceive their attitudes as more positive after learning environmental issues in their science classroom. The positive perceptions of rural students might point out that these persons have accepted the right to draw a better quality of life from their interactions with the environment, as well as permitting other people's rights to achieve their best sustainable quality of life.

Proceedings of the Australian Conference on Science and Mathematics Education, University of Sydney, Sept 29th to Sept 30th, 2014, page 46, ISBN Number 978-0-9871834-3-9.