Experiential-Reflective Teaching Approach :Effects on Student Environmental Sensitivity and Decision-Making Skills

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In response to the environmental problems brought about by natural processes and human actions, development of man's sensitivity and better decisions concerning the environment must be one of the major foci of the educational system. However, the discussion of environmental concepts and issues is not given much emphasis in the new Philippine K to 12 Basic Education Curriculum.

Experiential-Reflective Teaching Approach is an instructional approach combining the principles of experiential learning and reflective learning in which teachers develop science lessons through the process of utilizing and analyzing students' experiences with the environment. The approach is implemented in line with the educational goals of the new educational curriculum as well as with the goal of environmental education through the integration of environmental issues in science teaching. It is composed of four sub-instructional activities namely, Experiential Activity, Individual Reflective Practice, Processing, and Decision-Making activity. The study aimed at assessing the effects of Experiential-Reflective Teaching Approach on environmental sensitivity and decision-making skills of Grade 6 students and determining if the first positively predicts the latter. The study was conducted to Grade 6 students in a public elementary school in Tarlac City. The study made use of two instruments: Environmental Sensitivity Scale and Decision-Making Test on Environmental Issues. Results of the independent samples t-test showed that Experiential-Reflective Teaching Approach is an effective means of developing students' environmental sensitivity and decision-making skills. Moreover, linear regression showed that student environmental sensitivity is not a significant positive predictor of student decision-making skills.

Introduction

Today's global environmental problems such as frequent occurrence of very strong typhoons, declining water quality, poor solid waste disposal, and loss of ecological balance are of great concern. These changes in the natural environment resulted from the cumulative impact of the choices and actions of millions of individuals.

Learning to respect nature and understanding how to coexist with and care for the environment are essential tasks that everyone must face. The active participation of all members of society is crucial in tackling worldwide environmental problems, and education encourages such participation. However, Environmental Education (EE) is not given much emphasis in the new Philippine K to 12 basic education curriculum. The following are the only standards that pertain to environmental issues appreciation of the environment in Grade 3, 2) helping in minimizing waste in Grade 5, and 3) preserving estuaries and intertidal zones in Grade 6. Other than these, there are no more standards pertaining to environmental issues in the curriculum standards. This lack of emphasis, puts discussion of environmental issues in the back seat. (Department of Education, 2013).

People are not conscious of how their actions worsen environmental problems. Thus, it is imperative for humans to realize the linkages between natural systems and human activities. Sensitivity is important so the environment and humans may coexist harmoniously. Environmental sensitivity is manifested through the appreciation of nature and concern for environmental protection (Rabago, as cited in Nicer, 1999). An individual's environmental sensitivity may affect him or her in making a final stand on what to do when faced with an environmental issue (Blanco, 2013). Therefore, a key to ameliorating the current situation may lie in increased level of environmental sensitivity and execution of possible positive actions in order to avert the worst environmental catastrophe such as global climate change.

To uphold awareness and sensitivity for the natural surroundings, one has to own knowledge of the environment (Metzger & McEwen, 1999). Yet, sensitivity to the environment involves more characteristics such as feelings, beliefs, and emotions (Sivek & Hungerford, 1990). Such cognitive and affective aspects are shaped as a result of direct experiences with environmental issues (Palmer, 1998; Recuenco, 2007). Moreover, Ramsey (1993) believes that providing a learning environment to promote decision-making skills is crucial in the development of humans' confidence in their ability to affect change in their surroundings. Hence, providing this kind of learning environment could help students make responsible decisions in the future.

One way students make use of their experiences for learning and for analyzing what they are thinking is through reflection. Reflection, whether written or mental, is an effective tool for refining thoughts, ideas, and beliefs. Reflection enables one to evaluate experiences, learn from mistakes, repeat successes, and revise and plan for the future (Jacobsen, 2009). To aid in maximizing this kind of learning, a teaching strategy should be designed to provide a learning environment where students' experiences and reflective thinking are employed. It was already noted that the merging of experiential learning and reflection enhances students' logical-visualization skills, social awareness and scientific literacy in Biology (Consulta-Francisco, 2008). Though there were researches that focused on the factors in developing environmental sensitivity and decision- making skills, the methodology employed was mainly the presentation of the environmental issue through reading texts and video (Blanco, 2013; Gajo, 2010, Recuenco, 2007). However, there is a dearth of study that focuses on the use of students' experiences and reflective practice in developing environmental sensitivity and decision-making skills.

Purpose of the Study

This study investigated the effects of Experiential-Reflective Teaching Approach on students' environmental sensitivity and decision-making skills. Specifically, it focused on answering whether students exposed to Experiential-Reflective Teaching Approach have significantly better environmental sensitivity and decision-making skills than those exposed to Conventional Teaching Approach. This study also investigated whether

student environmental sensitivity is a significant positive predictor of student decision-making skills on environmental issues.

Methodology

Research Design and Sample

This study used a two-group pretest-posttest quasi-experimental research design. Two intact heterogeneous Grade 6 classes (consisting of a total of 67 students) from a public elementary school in Tarlac City were involved in the study. The two out of the three intact classes from the school were selected based on comparability of students' mean scores on the previously done pre- test on environmental sensitivity and decision- making skills. The two classes that were selected were then randomly assigned by toss coin to either Experiential-Reflective Teaching Approach Group or Conventional Teaching Approach Group.

Experiential-Reflective Teaching Approach is composed of four sub-instructional activities – Experiential Activity, Reflective Practice, Processing and Decision-Making Activity. The experiential activity utilizes experiments, simulations, role playing, and watching videos related to an environmental issue. Reflective practice involves students in a written individual processing of the issue of concern. Processing component highlights a student-led discussion and the last activity requires working on a possible solution to a problematic scenario. This approach combines experiential learning and reflective learning strategies. Experiential learning is a type of learning process whereby scientific knowledge of environmental issues is created through exposing students in activities and in contexts that are personally relevant to them while reflective learning refers to the individual processing of an environmental issue of concern, triggered by an experience, to create and clarify meaning in terms of self, and which results in a changed perspective.

Conventional Teaching Approach, on the other hand, refers to the type of teaching method that is directed mainly by the teacher. Storytelling, photo analysis and article reading are used to engage students in the learning process. Students' oral group discussions of the environmental issues are then, guided by questions provided by their teacher.

Eight environmental issues: water and electricity conservation, deforestation, endangered animals, air and water pollution, solid waste disposal and global warming were discussed to both groups in 16 sessions.

In the ERTA group, each group of five to six students performed experiential learning activities such as experiments, simulations, role playing, and watching video related to an environmental issue. Then, students were given 20 to 30 minutes to analyze the issue through written individual reflection.

For the conventional class, however, the teacher presented the environmental issue using either storytelling, photo analysis or article reading. Afterwards, each group of five to six students analyzed the environmental issue presented and the related science concepts.

Table 1 shows the comparison on how the lessons were presented in the experiential- reflective group and conventional group.

The teacher-researcher implemented the lessons in both classes during the fourth quarter of the school year 2014-2015. Student participants

Table 1.

Comparison of the Experiential-Reflective Teaching Approach Class and the Conventional Teaching Approach Class

Experiential-Reflective Teaching Approach Class	Conventional Teaching Approach Class
Presentation of the environmental issue via Alternative Learning Experience	Presentation of the environmental issue
Analysis of the environmental issue via Individual Reflective Practice (Written)	Analysis of the environmental issue via Group discussion (Oral)
Processing (Facilitated by the students)	Processing (Guide questions were provided by the teacher)
Decision-Making Activity	Decision-Making Activity

took the pretest and posttest on environmental sensitivity and decision-making skills.

Instruments

Two instruments were used to gather both qualitative and quantitative data on the environmental sensitivity and decision-making skills on environmental issues of Grade 6 students. Both instruments are researcher-constructed and written in the English language.

1. The Environmental Sensitivity Scale (ESS) is a checklist composed of 15 items that relate to the student's sensitivity along the following environmental issues: air and water pollution, biodiversity loss, global warming, solid waste disposal, urbanization, and water conservation. The response format of the scale was Likert type with three options of frequency, i.e., Always, Sometimes, and Never. The Cronbach Alpha, reliability coefficient, of the instrument is .705.
2. The Decision-Making Test on Environmental Issues (DMTEI) is an instrument covering four (4) environmental issues with two to three multiple-choice questions each. These questions also require students to justify their answers. This allows the researcher to know the bases of their decisions and how they are thinking critically about environmental issues. The Cronbach Alpha, reliability coefficient, of the instrument is .883.

The two instruments were pilot tested to Grade 7 students from a national high school in Tarlac City during the School Year 2014-2015. The students were chosen based on the assumption that the science lessons related to the environmental issues were already familiar to them. To establish the reliability and validity of the instruments, they were content validated by experts in the field of science and environmental education prior to the implementation of the study.

Results and Discussion

Students' Environmental Sensitivity

The mean, standard deviation, and the result of an independent samples t-test for the students' pretest and posttest mean scores in the Environmental Sensitivity Scale of the ERTA Group and the CTA Group are presented in Table 2.

Results of the ESS showed high consistency between the performances of the ERTA Group (M=15.15) and the CTA Group (M=15.45). Also, there was no significant difference between the pretest mean scores of the two groups which indicates the comparability of the two groups in terms of their environmental sensitivity prior to the intervention.

The environmental sensitivity level of students from both groups were classified into: "environmentally sensitive" (with scores 25 to 30), "moderately sensitive" (with scores 15 to 24), and "not yet sensitive" (with scores 14 and below) patterned on category groups made by Rabago (as cited in Nicer, 1999). Student participants of the ERTA Group and the CTA Group fell on the moderately sensitive level (with scores 15 to 24) as revealed by their pretest mean scores which are about 51% of the highest possible score. Conversely, results of the posttest showed that there was a significant difference in the performance of the two groups in favor of the ERTA Group (M=22.50).

Table 2.

Independent samples t-test for the students' pretest and posttest mean scores in the Environmental Sensitivity Scale

Measure	Group	Mean	SD	Df	t	Sig.
Pretest	ERTA	15.15	2.16	65	-.548	.585
	CTA	15.45	2.43			
Posttest	ERTA	22.50	2.92	65	5.034	<.001
	CTA	18.79	3.12			

Table 3.
Test of Change in the ESS Pretest and Posttest Scores per Environmental Issue

Environmental Issue	Group	Mean Gain	SD	df	t	Sig.
Air Pollution	ERTA	0.23	1.01	33	-1.270	.054
	CTA	0.03	0.72	32	-0.254	.200
Biodiversity Loss	ERTA	0.52	1.42	33	-1.659	.025*
	CTA	0.07	0.94	32	-0.197	.343
Global Warming	ERTA	0.48	1.04	33	-2.454	.002*
	CTA	0.53	1.46	32	-1.708	.023*
Solid Waste Disposal	ERTA	1.70	2.23	33	-4.174	< .001*
	CTA	1.23	2.01	32	-3.972	.003*
Urbanization	ERTA	0.47	1.50	33	-1.701	.025*
	CTA	0.27	1.13	32	-1.120	.050
Water Conservation	ERTA	1.80	2.55	33	-3.864	.001*
	CTA	0.23	1.30	32	-0.980	.167
Water Pollution	ERTA	0.37	1.22	33	-1.650	.028*
	CTA	0.49	1.04	32	-2.454	.010*

**p < .05*

It was therefore a timely effort that ERTA was implemented as a new instructional approach in order to increase the students' environmental sensitivity. Students' involvement in simulations and role playing as well as exposure to experiments and media during the first phase (Experiential Activity) of ERTA provided them with the science concepts behind each environmental issue. These concepts were used in analyzing the issues through reflection. Individual reflection exposed students' emotions with regard to their actions. Moreover, the ample time given to write individual reflections paved the way for more comfortable and better expression of students' own perspective about their surroundings and certain issues concerning the environment. Through this, they were able to assess themselves as well as revise and plan for better future actions toward the environment. This was supported by the study conducted by Metzger and McEwen (1999) that conceptual understanding of the environment is important in the development of environmental sensitivity. Concepts about the environment are best learned by on-the-spot observations rather than by discus- sion. Moreover, reflection, triggered by experienc- es, assesses the effectiveness of one's actions (Jacobsen, 2009), hence, awakening one's consciousness of his or her actions impacting the environment.

The influence of ERTA on the students' environmental sensitivity was extended on the analysis between the mean pretest and posttest scores of ERTA and CTA students in each environmental issue covered by the ESS (Table 3).

The test showed that the ERTA Group had significant mean gain scores in six out of the seven environmental issues, namely, biodiversity loss, global warming, solid waste disposal, urbanization, water conservation, and water pollution. While the CTA group had significant mean gain scores in three environmental issues only: global warming, solid waste disposal, and water pollution. This confirmed that ERTA activities significantly enhanced students' sensitivity to certain environmental issues. Students related the activities in a way that was more personal and reflected their sense of ownership of the environment.

For instance, during a session on solid waste, the students were excited as they were about to dispose some items from their bags. The researcher observed that some students were disgusted upon seeing the pile of trash their classmate was holding at the end of the line. The researcher heard comments such as:

> *Makalunus ne man, kaya ngan mipunta kalat tamu.* (I pity our classmate. All our trash are with him.)

Makalat ku mu rin kasi. (I produce so much trash as well.)
Kalat kasi tayo ng kalat kahit saan e. (It's because we always throw trash anywhere.)

The same was found by Hsu and Roth and Bandura that children become sensitive to issues and ideas associated to the environment through learning directly from life experiences in nature (as cited in Recuenco, 2007). Such experiences improved the students' appreciation of their actual environment (Boud, D., Keogh, R. & Walker, D., 1985; Boyd, E. & Fales, A., 1983). Moreover, reflective practice which focused on the individual level played an important role as a guide in re-examining their thoughts, feelings, and actions related to their experiences. Students' journal entries reflected what transpired in the learning environment. Reflective practice helped students recall their past experiences and actions. This led them to uncover, explore, and achieve meaningful modification of outlook on environmental protection. This was much supported by Salandanan's (2012) claim that students learn to express their own feelings, reactions, and beliefs in a sincerest manner when reflection is written. Written reflections expose fun, satisfaction, and surprises during the day's activities (Salandanan, 2012). In the present study, students' reflections and reactions also revealed feelings such as guilt, disappointment, frustration, and regret. Hence, results agreed with Jacobsen (2009) that reflection enables an individual to repeat successes, learn from mistakes, as well as revise and plan for the future situations.

It should be noted that after the intervention, 17.65% of the ERTA group were already categorized as environmentally sensitive, whereas, for the CTA group it was only 6.06% (Table 4). This implied that although the environmental sensitivity of the majority of the ERTA students remained to be at the moderately sensitive level, the intervention was capable of developing more highly environmentally sensitive students in a class compared to CTA. This proved that the Experiential-Reflective Teaching Approach is more effective than the Conventional Teaching Approach in enhancing the environmental sensitivity of students.

Results of the study revealed that as the students performed experiential activities such as experiments, simulations, and role playing, they acquired knowledge on the nature of environmental issues. These experiences and acquired scientific knowledge triggered students' examination of their actions and feelings toward the environment. Since the activities involved more individual feelings, beliefs, and emotions, sensitivity to the environment was cultivated. The same was noted by Sivek and Hungerford (1990). They found that the development of environmental sensitivity touched both affective and cognitive aspects. Students were not only engaged in analyzing environmental issues and understanding concepts about the environment but also exposed feelings such as appreciation, guilt, and frustration over things that concern and impact the environment. These would not have surfaced had the teacher not exposed them to experiential and reflective activities.

The ERTA in this study acted as a trigger for the ignition of students' sensitivity and awareness of the environment. Experience with reflection served as a meaningful tool to awaken sensitivity to environmental issues.

Students' Decision-Making Skills

The mean, standard deviation, and the result of an independent samples t-test for the students' pretest and posttest mean scores in the Decision-Making Test on Environmental Issues (DMTEI) of

Table 4.
Percentage of environmentally sensitive, moderately sensitive and not yet sensitive students for ERTA and CTA groups

	ERTA		**CTA**	
	Pretest	Posttest	Pretest	Posttest
Environmentally Sensitive	0.00	17.65	0.00	6.06
Moderately Sensitive	55.88	82.35	57.58	93.94
Not Yet Sensitive	44.12	0.00	42.42	0.00

Table 5.
Independent samples t-test for the students' pretest and posttest mean scores in the Decision-Making Test on Environmental Issues

Measure	Group	Mean	SD	Df	t	Sig.
Pretest	ERTA	15.73	3.09	65	1.010	.316
	CTA	14.92	3.44			
Posttest	ERTA	30.19	5.40	65	15.198	<.001
	CTA	15.46	1.39			

the ERTA Group and the CTA Group are presented in Table 5.

Results of the pretest showed high consistency between the performances of the ERTA Group (M=15.73) and the CTA Group (M=14.92). Also, there was no significant difference between the pretest mean scores of the two groups which indicated their comparability in terms of decision-making skills prior to intervention. Moreover, the pretest mean scores showed that the students of both groups had a below average level of decision-making skills, i.e., about 35% of the highest possible score. Therefore, it was necessary to improve this cognitive ability in order for the students to meet the demands of this world.

Posttest results showed that students of ERTA Group had better decision-making skills than (M=30.19) the students of CTA Group (M=15.46) and this difference is significant. Also, it can be noted that the mean score of ERTA Group was higher than the passing score (67%) while the CTA group's mean score remained below the passing score (34%). These results suggest that ERTA is effective in improving students' decision-making skills. Involvement in experiential activities provided students with deeper scientific knowledge about the problem and had emotional impact on them and served as basis for their decisions. Also, reflecting on their experiences helped students become more aware of the effects of the environmental issue on them which further establishes clear personal motives. Moreover, ERTA students' responses reflected realization of their unfavorable actions and their intention to do better in the future. This confirmed that reflective questions elicit motives, allowing students to speculate on causes, and to consider the impact of their actions and decisions and contemplate on the outcomes (McKenzie, M., 2003).

To further probe the effect of ERTA on decision-making skills, transcribed audiotaped recordings of class discussions were analyzed to show how students arrived at their decision during their decision-making activities following the steps of the Decision-Making Process Model designed for the use of the study.

Defining the environmental problem

a. Identifying the objectives to be met by the solution
b. Enumerating possible alternatives and analyzing the positive and negative consequences of each
c. Choosing the best alternative
d. Justifying the chosen decision

In this study, environmental problems were already stated by the teacher-researcher at the start of the decision-making activity. Students started their tasks by setting objectives to be met by their solutions based on the given scenario. Group discussions during the activity revealed that students were able to identify the objectives to be met by the solutions. Also, they were capable of proposing decision alternatives. However, it was observed that students became more argumentative when discussing the positive and negative consequences of each alternative. Students' argumentations were in consideration of the class activities. Also, their personal feelings after the activities were evident in the group discussions. Moreover, results of the study showed that the students' decision making does not strictly follow the sequential format prescribed by the Decision-Making Process Model. Students' justifications of their decisions

may not be the last step rather it can be observed in their arguments when analyzing each decision alternative.

Results show that ERTA activities such as experiments, simulations, role playing, and watching videos significantly provided students the needed science concepts which they use as basis for their decisions. Thus, students become more confident in defending their chosen alternative. These findings supported the claims about the positive effect of experiential learning in enhancing problem-solving ability, realizing linkages between academic study and real-world problems and broadening student understanding of ethical behavior beyond notions of right and wrong (Hake, 1998; Ratcliffe, M., 1997; Ratcliffe, M., & Grace, M., 2002; Rogers, C., 1957). Also, the present study confirmed the claim of Rudd (2007) that reflective thinking plays an important role in prompting the thinker during problem-solving situations by providing opportunity to step back and think of the best strategies to achieve goals. Recorded students' responses and discussions hold that reflective practice promoted personal learning, behavioral change, and improved performance. In the study, it was revealed that merging experiential and reflective learning is an effective way in developing decision-making skills of elementary children.

Moreover, factors, other than scientific knowledge and values, that affect students' decision making were revealed in the study. These are home environment, authority figure (i.e., parent), and peers. Based on students' responses, it can be noted that children at the elementary level have high regard for authority figures, their immediate environment as well as their peers. This further categorizes Grade 6 students into the Pre- conventional and Conventional Levels of Kohlberg's (1981) stages of moral development.

Relationship between Student Environmental Sensitivity and Decision-Making Skills

Table 6 presents the mean, standard deviation, and the results of the Pearson product-moment correlation between the posttest scores of the ERTA Group in the Environmental Sensitivity Scale (ESS) and the Decision-Making Test on Environmental Issues (DMTEI). The result of the Pearson product-moment correlation (p=.651) indicated that there is a negative correlation between the ESS (M=22.50, SD=2.92) and the DMTEI (M=30.19, SD=5.40).

The mean, standard deviation, and the results of Linear Regression between the posttest scores of the ERTA Group in the ESS and DMTEI are presented in Table 7. Results showed that 0.6% (R2=.006) of the total variability in the DMTEI is explained by the ESS. Moreover, the result of Linear Regression (p=.651) indicated that student environmental sensitivity does not significantly predict the stu-

Table 6.
Pearson R Correlation between the posttest scores in the Environmental Sensitivity Scale and the Decision-Making Test on Environmental Issues

Measure	Posttest Mean	Posttest SD	df	Sig. (2-tailed)
ESS	22.50	2.92	65	.651
DMTEI	30.19	5.40		

Table 7.
Linear relationship between the posttest scores in the Environmental Sensitivity Scale and the Decision-Making Test on Environmental Issues

Measure	Posttest Mean	Posttest SD	R Squared	F	t	Sig. (2-tailed)
ESS	22.50	2.92	.006	.209	.457	.651
DMTEI	30.19	5.40				

dents' decision-making skills.

The results of the study can be attributed to factors such as opinions of adults like parents and teachers and influence of peers. Some students' responses showed that they give high considerations to their parents and teachers' opinions. Parental influence on students' decision making can be explained by the age of the research participants. Since students at their age are still living with their family, they were obliged to listen and comply with what their parents say. Moreover, younger children give high regard to their teachers. At their age, students find difficulty in distinguishing relevant and irrelevant information (Howse, Best, & Stone, 2003). Therefore, they tend to decide and act according to what and how they practice things at home and in school. This is supported by Kohlberg's (1981) statement that most elementary students' level of moral development is at the first level (Pre-conventional). The pre-conventional level holds that one behaves in compliance with the socially accepted norms set by authorities compelled by the threat of punishment. This revealed that elementary students' decisions are mostly for compliance rather than dependent on what they know and believe in.

Also, results of the study showed that as the students interact with their classmates, they tended to be doubtful of their personal views and decided based on what the majority agreed upon. Students at their age were swayed by those they are affiliated with (i.e., peers). This attitude which seeks to do what will gain the approval of others is a characteristic of Kohlberg's (1981) first stage of Level B (Conventional). Hence, elementary students' sensitivity to the environment did not translate into better decision-making skills.

The present study confirmed the claim of Yee and Flanagan that children's involvement in decision making (either deciding with parents or deciding on their own) increases over ages 9 to 13 (as cited in Lundberg et al., 2009), while children's autonomous decision making (deciding without parental input) increases over ages 12 to 17 (Dornbusch et al., as cited in Lundberg et al., 2009). Furthermore, Lundberg et al., (2009) added that shared decision making tends to rise between ages 10 and 12, but then falls or remains stable from 12 to 14 as independent decision making arises. In particular, to the present study, this meant that although the students are environmentally sensitive, their decisions were greatly affected by their home environment and school practices. Students do things the way they are usually done at home.

Furthermore, the non-significance ($p = .651$) may also have been caused by the length of time of the intervention. The present study lasted for four weeks only due to school policies on period allotment while that of Blanco (2013) covered the whole grading period (about 8 weeks). Thus, the disagreement of this study to that of Blanco's (2013) claim that environmental sensitivity is a significant positive predictor of decision-making skills of the students was basically due to the difference in the duration of intervention. Moreover, results confirmed Hudson's (2008) finding that there is a need to observe actual environmental behavior over a long-term period to compare the effectiveness of action-oriented intervention in the classroom. Hence, considering the results of this study, it will be good to find out if behavioral change would happen within a semester or a school year.

Conclusions

From the results of this study, it can be said that Experiential-Reflective Teaching Approach had positive effects on student environmental sensitivity and decision-making skills. Specifically, Experiential-Reflective Teaching Approach was more effective than the Conventional Teaching approach in improving the students' sensitivity and decision-making skills on environmental issues. Moreover, this study established that student environmental sensitivity was not a significant positive predictor of student decision-making skills concerning the environment.

Recommendations

With the positive results of Experiential- Reflective Teaching Approach as an instructional approach, it is recommended that science teachers as well as other subject teachers use it as a framework for developing lessons, instructional materials, assessment tools, and learning activities in developing the environmental sensitivity and deci-

sion-making skills of their students.

Since students' immediate environment and affiliations were exposed as influential factors in their decision making and moral development, they should be exposed to people whose environmental sensitivity and moral reasoning are at higher levels than theirs. Hence, education about the environment should not only be confined within the four walls of the school setting. Hence, concentrated effort within the community of Filipino students is greatly encouraged.

It is also recommended that future researchers explore the effects of ERTA on other learning outcomes such as students' environmental literacy, consumerism, and acquisition of other 21st century skills.

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