



## DOES *REFLECTIVE PEDAGOGY* MAKE ENVIROMENTAL LACTURER BE BETTER?

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### Abstract

Environmental education is an aspect of education for students who are important to support life in the future. In the learning process there are several factors that influence success in learning. One of them is the ability factor of teaching from a teacher include material, method and learning media. However, there are important factors that need to be considered, namely the ability of teachers to reflect themselves during the learning process. Therefore it is necessary for the research to know the reflection of teachers in the learning process. This study aims to determine the effect of teacher reflection on student learning outcomes. The study involved as many as 15 students of English education. Data obtained in the form of student reflection data, questionnaire value of pro-environment attitudes. The data obtained were analyzed using Paired Samples T-Test. The results showed that the process of reflection that has not been optimal can't improve the quality of learning.

**Keywords:** pro-environment, reflection of paradigm pedagogy, lecturer, learning

### 1. Introduction

Lecturer are an important profession in the advancement of an education. One of them is a chemistry lacturer. In the field of chemistry there is a topic that focuses more on the environmental field, namely environmental education. Environmental or pro-environment education has a strategic role in fostering environmental insight. The presence of qualified environmental educators will help students in understanding the application of pro-environment.

The current environmental topics are a very important part to be developed, given that Indonesia's environmental conditions are getting worse and this is not balanced with the quality of teaching on the environmental midwife. Pro-environment topics include several aspects: transportation behavior, consumption behavior, reforestation, recycling, green industry and openness thinking Schultz, PW & Zelezny, LC (1998), Openness to Experience, Markowitz, EM, Goldberg, LR, Ashton, MC, and Lee, K. (2012).

Pro-environment learning process is certainly done as the learning process of other topics that include: preparation of learning tools, learning implementation, learning evaluation and learning development. One of the pro-environmental

learning that is applied in Chemistry Education University of Muhammadiyah Semarang University is the introductory subject of environmental chemistry and environmental chemistry. During the last 4 years, the results of on-field evaluation in campus living are still many students who have not yet significantly addressed the pro-environment attitudes. This makes the researcher interested to evaluate the learning process.

There are several ways to improve the recommended learning process, namely the method. One way to improve learning process, teachers can do reflection. Reflection can be done by teachers or also students, so that will be treated conditions during the learning process. One of the improvements that has been done is by changing the method, Socio-Science Texts Based on Local Potential (Eko Yuliyanto, 2016).

Based on several studies stated that, reflection can improve the teacher's ability to teach, but it can also increase teacher creativity. As in general, reflection can be done by asking teachers and students to include "What has been gained from the learning process?", "What values are obtained when the process is taking place?" And "What will be done next (implementation)?"



There are several advantages of reflection as suggested by John Dewey (1933) argue that learning from experience can enrich knowledge by reflection and Donald A. Schön (1987) states that reflection training reflects how important it is to improve professionalism in teaching. Jack Mezirow, (1991, 2000) states that reflection can make more care in learning where in interpreting reality and interpreting every action and behavior. Therefore in this case it is necessary to hold activities and ways of reflection on pro-environment learning to help improve professionalism in learning.

## 2. Method

This study uses research with a pretest-posttest group design. This research uses sample (n = 15). The data used in this research are lecturer reflection and student's pro-environment attitude. The data obtained were processed by Paired Samples T-Test analysis

## 3. Results

In Reflective Pedagogy Paradigm, every learning process consists of several stages of context, experience, reflection, action, and evaluation. The learning process began when all instruments existed. The model lecturers made the learning process and the results of the lecturer's mentoring are presented in Table 1.

Table 1. Results of Lecturer's reflection

Context	Experience	Reflection	Action	Evaluation
3	2.25	3,5	2	Pre-test = 126.9 Post test = 130 p=0.170

During the pre-test and post-test learning process, the pro-environmental attitude data is obtained as follows:

Table 1. Pro-environmental attitude

Pre	Post
123	136
117	114
128	125
130	142
154	145
120	136

108	108
125	136
139	136
139	129
124	137
114	119
133	133
115	112
135	144

After obtained by research data in the form of lecturer reflection and pro-environment attitude hence conducted analysis to the data. Results Paired Samples T-Test obtained data that.

Table 2. Paired Samples Correlations

	N	Correlation	Sig.
Pair 1 Pre & Post	15	.740	.002

While the analysis results Paired Samples Test obtained Sig. (2-tailed) .170

## 4. Discussion

The results of lecturer reflection obtained by the data as follows, context: 3, Experience: 2.25, Reflection: 3,5, Action: 2 and evaluation: p = 0.170.

*Reflective Pedagogy Paradigm (RPP)* was able to improve the performance of lecturers in teaching, to enhance the readiness of lecturers in teaching, to make the students able to reflect on the learning process and to be more active (Yosef Wijoyo, 2016).

It is in line with: *Learning From Experience Is Enriched By Reflecting On Experience* (Dewey, J. (1933). *And Represents The Reflective Practice An Important Factor To Improve Professional Activity* (Schön, D.A., 1983) *.Reflection Is A Central Role In Learning Because Through It We Become Aware Of The Ways In The Which We Interpret Reality And Give Meaning To The Actions And Behavior* (Mezirow, J. 1991).

The repair process of learning is not only centered on the teachers, but there are a lot of things to do. However, there are important things owned by a teacher who is doing the learning



directly in the classroom. It is in line with the following statement.

*"The most powerful, durable, and effective agents of educational change are not the policymakers, the curriculum developers or even the education authorities themselves; they are the teachers (Sellars, M., 2012)*

So, improvements in the learning process for a lecturer is very important. In the learning process. In environmental learning that has been done has applied reflection by applying several stages, namely context: 3, Experience: 2.25, Reflection: 3.5, Action: 2 and evaluation:  $p = 0.170$ . Based on the results of the reflection obtained very diverse data, and it shows that reflection has been done, but the results are still low. So the possibility of learning process has not been satisfactory. However, in line with the improvement of reflection and action, new actions will arise in improving learning.

The evaluation of pro-environment attitudes shows no significant difference between pre-test pro-environment attitudes and post-test pro-environment attitudes. This expectation is still far from the goal of learning so that students have a much better pro-environment attitude. This is the important reflection of learning by lecturers to improve the learning process and improve student achievement.

## 5. Conclusion

The lecturer had already been able to apply the teaching strategies based on Reflective Pedagogy Paradigm, so they can actually apply the real learning in the classroom, but can't improve the quality of student learning and pro-environmental behavior.

## 6. Acknowledgement

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