

# **THE EFFECT OF PROJECT BASED LEARNING (PjBL) ON STUDENTS' UNDERSTANDING AND CREATIVITY IN LEARNING GLOBAL WARMING CONCEPT**

Ahmad ZimamulUmam  
International Program on Science Education

## **ABSTRACT**

This research investigated the effect of project based learning (PjBL) on students' understanding and creativity in learning global warming concept. The method which is used in this research was combination of pre experimental and descriptive with one group pretest-posttest design. The sample was taken purposively (n=19 students) grade secondary 1 in a Private International School. The quantitative data of this research was obtained through objective test, while the qualitative data was gained through rubric and questionnaire. According to the analysis of the research, it is obtained an improvement in both students' understanding and creativity. Students' understanding improvement obtained normalized gain as much as 0.61 which is categorized into medium improvement. The students' creativity is shifting. Before project based learning being implemented it was in enough categories and changed into good category in the end. It shows that project based learning can facilitate students to explore their creativity. The improvement occurred in all creativity dimensions that are *novelty, resolution, and elaboration & synthesis*. Students' respond toward implementation of project based learning showed positive respond in all indicators. It indicates that the implementation of project based learning in global warming concept can improve students' understanding and creativity in secondary level.

Key words: Project based learning, students' understanding, students' creativity, global warming

## PREFACE

Bismillahirrahmaanirrahiim.

All of praises and gratefulness are always given to Allah SWT for His blessing, mercy, and love so that the writer can finish research paper entitled “The Effect of Project Based Learning on Students’ Understanding and Creativity in Learning Global Warming Concept”. *Shalawat* and *salam* may always be devoted to our Great Prophet Muhammad SAW, to all his families, relatives, and also to all Muslims brothers around the world.

This research paper is the last demands and requirements for all university students in educational major to finish their study and obtain *SarjanaPendidikan*, the same requirements in International Program on Science Education study program. There are five chapters in this research paper that describes how is the effect of project based learning on students’ understanding and creativity in learning global warming. The research paper consists of introduction, supportive theory, research methodology, result and discussion of the research, conclusion and recommendation.

However, the perfection belongs to Allah SWT, the author realizes that this research paper still has so many weakness and need to be improved. Therefore, the writer expects comments and suggestions are most welcome to improve the quality of learning process in the future. Hopefully the results that presented in this research paper can be useful for all readers from educational field as reading source and reference to gain more knowledge.

Bandung, July 2014

The Author

## ACKNOWLEDGEMENT

The completion of this research paper is not spared from the help of various parties in so many ways to the author, therefore in this occasion the author would like to express deepest thank you and highest appreciation to the following:

1. Dr. Harry Firman, M.Pd as my supervisor who always motivates me and gives me the best suggestion to improve my research paper. Thank you for everything that you taught and guide me to become a long life learner.
2. Mrs. Rika Rafikah Agustin, M.Pd as my supervisor who always support me to finish my research paper. Thank you for the kindness and patience in guiding the author to finish his research paper.
3. Dr. Diana Rochintaniawati, M.Ed as Head of Study Program of International Program on Science Education thank you for your motivation and guide me during writing research paper. Thank you for all advices and spirits that you always give to me.
4. DarulHikam International School family. Mrs. Niknik as principal, thank you for the permission to implement the research. Mrs. Binar, thank you for the guidance and motivation during the teaching practice program. And also for all teachers and staff, thank you for the help and support. My students in Secondary 1 A and 1 B, thank you for being such a great students and thank you for the experience, knowledge, cooperation, spirit and pray.
5. My beloved family. My sisters, AlfiNurHidayati and Fanny FairuzLubbiyah, thank you for the support, it meant a lot for me. My Mom and Dad who always be there for me. Thank you for the support, patience and pray. I am very thankful to have you all, I dedicated my research paper to my beloved Mom and Dad, IbuSitiMunawati and BapakMustamiin.

6. My guidance partner, TitaYartini. Thank you for being such a great partner during finishing the research paper, and also thank you for the spirit, support and help.
7. My classmates of IPSE batch 2010 who always support and remind me to finish the research paper, Rifqi, Reza, Belgha, Rizal, Ryad, Tita, Novi, Frili, Dineu, Atikah, Nurul, Silmi, Owe, Adinda, Ajeng, Shinna, Ifa, Syara, Mahri, and Sadakat.
8. My best friend, DaniNurArifin. Thank you for always support me to be a better person. And also Ahmad FauziMulyana and Dimas Mutiar, thank you for the support during finishing the research paper. You all remind me that a friend will never let their friend feel alone. May Allah bless our friendship.

The author also place on record, my sense of gratitude to one and all who directly or indirectly, have lent their helping and in this research paper accomplishment. May all helps and kindness that have been given will be rewarded more by Allah SWT.