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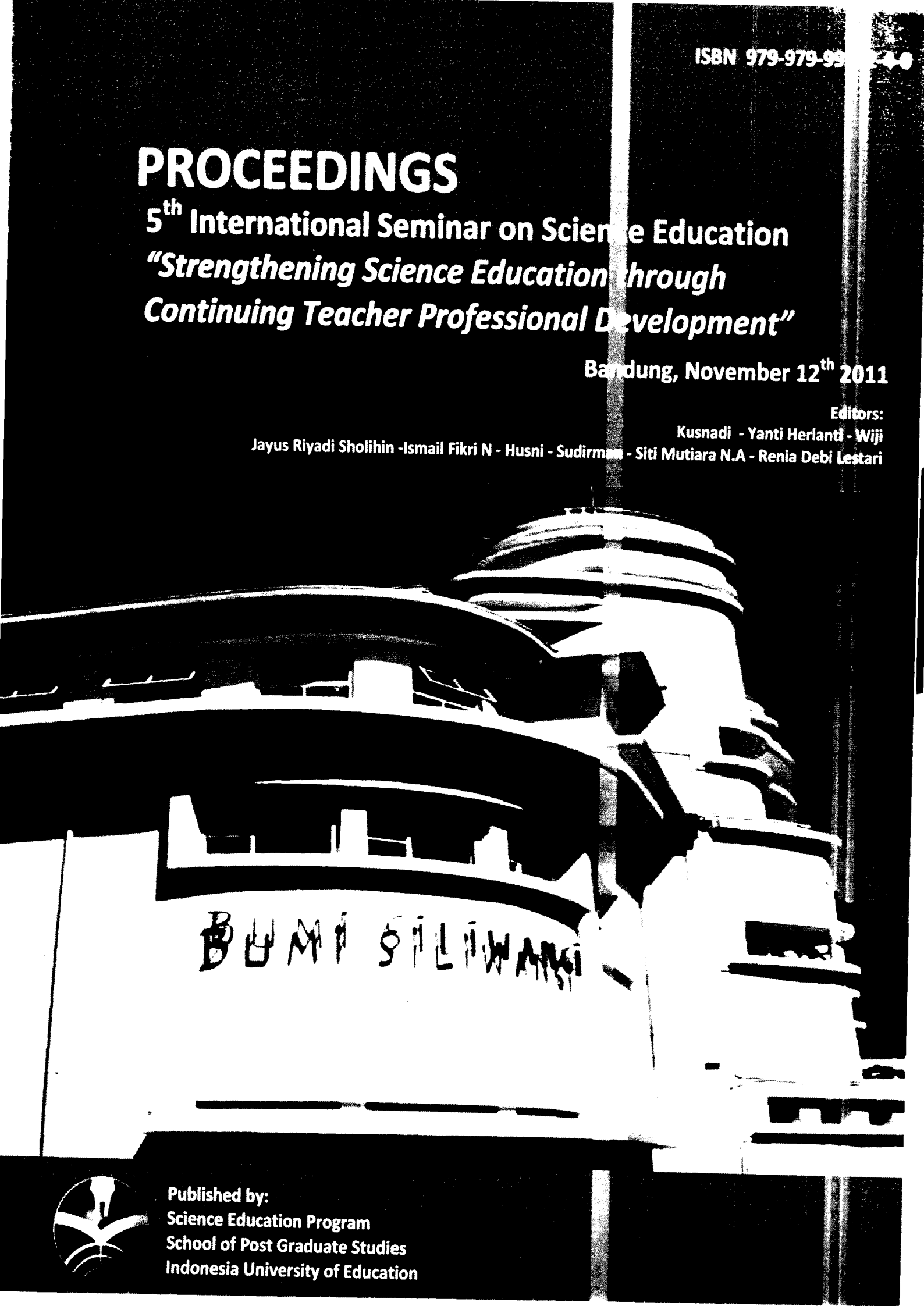
PROCEEDINGS

5th International Seminar on Science Education
*"Strengthening Science Education through
Continuing Teacher Professional Development"*

Bandung, November 12th 2011

Editors:

Kusnadi - Yanti Herlanti - Wiji
Jayus Riyadi Sholihin - Ismail Fikri N - Husni - Sudirman - Siti Mutiara N.A - Renia Debi Lestari



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I. JUDUL

II. Kusnadi, dkk (Eds)

Preface

This Seminar conducted to fulfill annual agenda of science education programs of Indonesia University of Education, Post Graduate School. This is the fifth international seminar that has been conducted by the program.

The seminar theme “**5th International Seminar on Science Education Strengthening Science Education through Continuing Teaching Professional Development**”. There are many problems of science education in Indonesia. One of them is how to continue teaching professional development. We are not able to overcome the problems ourselves. We need input of information and experience for many researchers all over the world. Therefore this seminar will be an exchanged experience to solve the problems of science education and lead to the discovery of continuing teaching professional development to enter strength science education.

I would like to express my special gratitude to Prof. Peter Aubusson from University of Technology Sydney Australia, Prof. Matsasugu Murase & Yoshitaka Tanaka from Shinshu University, and Dr. Unifah Rosyidi from BPSDMP & PMP, National Education Ministry, Indonesia, who are specially came here to be key note speakers. Thank you for sharing the result of your latest result with us.

Finally, I would to thanks to committee who are been working hard to prepare the seminar and publish the proceedings. Last but not least, thank you for all speakers and participants of contribute today.

Bandung, 12 November 2011
Chair of Science Education Program
School of Postgraduate Studies
Indonesia University of Education

Prof. Dr. Anna Permanasari, M.Si.

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IMPLEMENTING RECIPROCAL TEACHING (RT) ON BIOLOGY LEARNING TOWARD METACOGNITION SKILL THE UPPER AND LOWER ABILITY SENIOR HIGH SCHOOL STUDENT IN JEMBER

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Abstract

Biology as one of the natural knowledge science fields provides the students the learning experience that requires them to be independent learners. The metacognition skill guides the students to be self-regulated learner. Self-regulated learner is responsible to enhance the progress of learning. One of the learning strategies that can potentially overcome this problem is Reciprocal Teaching (RT). Learning strategy that has a characteristic to make the thinking skill useful is RT. If the RT strategies is used, it will be a main potential strategy in increasing the metacognition skill. This study aims at finding out: 1) the effect of the learning strategy toward the metacognition skill, 2) the effect of the academic ability toward the metacognition skill, 3) the interaction of the learning strategy and the academic ability toward the metacognition skill.

This study was quasi experimental design. The procedure of the experimental study was pretest-posttest nonequivalent control group design. This study included independent and dependent variables. Independent variables were the learning strategy and the academic ability. Dependent variables were the metacognition skill. The population of this study was the 10th grade students the public and private senior high schools in Jember. The sample technique was cluster random sampling. The samples were 33.3% students with upper academic ability (UA) and 33.3% students with lower academic ability (LA). The metacognition skill was measured through rubric developed by Corebima. The data of the metacognition skill were gathered through pretest and posttest. The data analysis by analysis of covariance (anacova) that were taken place at least significance difference (LSD). In guiding the calculation, the data were analyzed by using the computer program of SPSS for Window 16.0 version.

Findings showed that: 1) the learning strategy affected toward the metacognition skill measured through rubric; 2) there was difference between the students with UA and LA. 3) there was no effect between the learning strategy and the academic ability toward the metacognition skill. RT strategies could increase the metacognition skill The RT strategies was significantly approved in increasing the metacognition skill. The interactions of the RT with the academic ability could minimize the gap of the metacognition skill of the students with UA and LA.

Keywords: *reciprocal teaching (RT), metacognition Skill, biology, Upper ad lower academic*

INTRODUCTION

Metacognition and skills activity to think in high level is a basic potency that is needed to be developed in student self. Metacognition is the important part in learning process (Efklides, 2006; Nashon, Anderson & Nielsen, 2005). Metacognition aspects less have attention whereas it has the important role in solving learning problems. O'Neil and Abedi (1996) stated the need of metacognition in solving learning problem. According to William (2002), students intelligence can be identified, assessed, and being the facility to increase meaningful learning so that students success in their learning. The success of learning is caused by using reflective learning strategy. It causes students to realize on their power in learning.

According to Eggen and Kauchack (1996), the development of metacognition proficiency in students is the valuable purpose of education. It is because; this proficiency can help them to