**PENINGKATAN KEMAMPUAN PEMAHAMAN KONSEPTUAL DAN BERPIKIR REFLEKTIF MATEMATIS SERTA DAMPAKNYA TERHADAP *HABITS OF STRIVING FOR ACCURACY AND PRECISION* PESERTA DIDIK SMA MELALUI MODEL PEMBELAJARAN**

***DEEPER LEARNING CYCLE***

**Melinda Nur Rahmatika1, Poppy Yaniawati2, Panca Pertiwi Hidayati3**

**Magister Pendidikan Matematika, Universitas Pasundan**

**Jl. Sumatera No.41, Bandung**

**melindanur.mn@gmail.com1****,** **pyaniawati@unpas.ac.id2****,** **panca.pertiwi.hidayati@unpas.ac.id3**

**ABSTRAK**

**Melinda Nur Rahmatika,(2019). Peningkatan Kemampuan Pemahaman Konseptual dan Berpikir Reflektif Matematis serta Dampaknya Terhadap *Habits of Striving For Accuracy and Precision* Peserta Didik SMA melalui Model Pembelajaran *Deeper Learning Cycle*.**

Rendahnya kemampuan pemahaman konseptualdan berpikir reflektif matematis serta *Habits of Striving For Accuracy and Precision*peserta didik IPA SMAN 25 Bandung merupakan permasalahan yang menuntut guru untuk dapat menciptakan dan menggunakan suatu pendekatan baru dalam pembelajaran. Penelitian ini merupakan metode campuran (*Mixed Method*) tipe *Embedded Desain*dengan jenis *Embedded experimental model* dengan desain penelitian berbentuk *pretes-postescontrol grup design*, bertujuan untuk melakukan studi yang berfokus pada penggunaanmodel pembelajaran *Deeper Learning Cycle*(DELC) yang diduga dapat meningkatkan kemampuan pemahaman konseptual dan berpikir reflektif serta dampaknya terhadap *Habits of Striving For Accuracy and Precision*peserta didik. Populasi dalam penelitian ini adalah peserta didik SMAN 25 Bandung. Pemilihan sampel dilakukan dari populasinya secara purposif (*purposive sampling*)2 kelas yang pada tahun ajaran 2018/2019. Kelas XI IPA 4diberikan perlakuan dengan model DELCdan kelas XI IPA 6dengan pembelajaran konvensional. Instrumen yang digunakan dalam penelitian ini adalah tes kemampuan pemahaman konseptual, tes kemampuan berpikir reflektif matematis, dan angket *Habits of Striving For Accuracy and Precision*, lembar observasi, dan wawancara. Berdasarkan analisis data diperoleh kesimpulan bahwa (1) Peningkatan kemampuan pemahaman konseptual matematis peserta didik yang memperoleh pembelajaran DELC lebih baik daripada peningkatan kemampuan kemampuan pemahaman konseptual matematis peserta didiktinggi, sedang dan rendahyang memperoleh pembelajaran konvensional, (2) Peningkatan kemampuan berpikir reflektif matematis peserta didik yang memperoleh pembelajaran DELC lebih baik daripada peningkatan kemampuan kemampuan berpikir reflektif matematis peserta didiktinggi, sedang dan rendahyang memperoleh pembelajaran konvensional, (3) *Habits of Striving For Accuracy and Precision*peserta didiktinggi, sedang dan rendah yang memperoleh model DELClebih baik *Habits of Striving For Accuracy and Precision* peserta didiktinggi, sedang dan rendah yang memperoleh pembelajaran konvensional, (4) Terdapat hubunganpositif antara kemampuan pemahaman konseptual matematis peserta didik dengan kemampuan berpikir reflektif matematis peserta didik.

Kata kunci: *Deeper Learning Cycle*(DELC)*,* kemampuan pemahaman konseptual, kemampuan berpikir reflektif,*Habits of Striving For Accuracy and Precision*peserta didik.

**ABSTRACT**

**Melinda Nur Rahmatika,(2019). The Enhancement of Mathematical Conceptual Understanding and Reflective Thinking Abilities and Its Impact to Senior High School Students’ Habits of Striving for Accuracy and Precision through Deeper Learning Cycle Learning Model.**

The low understanding of SMAN 25 Bandung science students’ mathematical conceptual understanding and reflective thinking ability and their habits of striving for accuracy and precision was a problem that demanded teachers to have an ability to create and use certain approach in their teaching learning activities. This study is an embedded design mix method that used an embedded experimental model where the research design adopted pre-test post-test control group design. The focus of conducting this study was applying the Deeper Learning Cycle (DELC) learning model which was thought would be able to enhance the students’ conceptual understanding and reflective thinking abilities and to give a positive impact to their habits of striving for accuracy and precision. The population of this research was the pupils of SMAN 25 Bandung. The sample chosen from the population used a purposive sampling which involved two classes of grade eleven of the academic year 2018/2019. The Science 4 class was given the DELC model treatment while the Science 6 class was given conventional learning. Instruments used in this study were conceptual understanding ability, mathematical reflective thinking ability test, and habits of striving for accuracy and precision questionnaire, observation sheet, and interview. Based on the data analysis, some conclusions that can b drawn are: (1) The enhancement of the students’ mathematical conceptual understanding ability who are treated using DELC model is better than the enhancement of students’ mathematical conceptual understanding with high, moderate, and low ability who are given conventional learning. (2) The enhancement of the students’ mathematical reflective thinking ability who are given the DELC model treatment, is better than the enhancement of the students’ mathematical reflective thinking with high, moderate, and low ability who are given conventional learning. (3) The students’ habits of striving for accuracy and precision for students with high, moderate, and low ability who are treated using the DELC model are better than the students’ habits of striving for accuracy and precision for those with high, moderate, and low ability that are given conventional learning. (4) There is a positive relation between the students’ mathematical conceptual understanding ability and the students’ mathematical reflective thinking ability.

Keywords: deeper learning cycle (DELC), conceptual understanding ability, reflective thinking ability, students’ habits of striving for accuracy and precision.

**DAFTAR RUJUKAN**

Hendrayana, A. (2015). *Pengaruh Pembelajaran Pendekatan Rigorous Mathematical Thinking (RMT) terhadap Pemahaman Konseptual, Kompetensi Strategis, dan Beban Kognitif Matematis Siswa SMP Boarding School*. Disertasi SPs UPI: Tidak diterbitkan.

Indrawan, R. dan Yaniawati, P. (2014). *Metodologi Penelitian Kuantitatif, Kualitatif dan Campuran untuk Manajemen, Pembangunan dan Pendidikan*. Bandung: Refika Aditama.

Meltzer, D. E. (2002). *The Relationship between Mathematics preparation and conceptual learning gain in Physics: A possible hidden variable in diagnostic pretest scores*. American Journal Physics. 70(2). 1259-1267.

Qadarsih, N.D. (2017). Pengaruh Kebiasaan Pikiran (*Habits Of Mind*) Terhadap Penguasaan Konsep Matematika. Jurnal SAP Vol. 2 No. 2 Desember 2017.

Ruseffendi, E.T. (2006). *Pengantar kepada Membantu Guru Mengembangkan Kompetensinya dalam Pengajaran Matematika untuk Meningkatkan CBSA*. Bandung: Tarsito.

Ruseffendi, E.T. (2010).*Dasar-Dasar Penelitian Pendidikan & Bidang non-Eksakta Lainnya*. Bandung: Tarsito.

Saputra, Jusep (2015). *Penggunaan Model Problem Based Learning Berbantuan E-Learning dalam Upaya Meningkatkan Kemampuan Pemecahan Masalah Matematis dan Dampaknya terhadap Kemandirian Belajar Mahapeserta didik*. Tesis: Unpas Bandung.

## Suherman, E. (2003). *Evaluasi Pembelajaran Matematika.* Bandung: JICA FPMIPA UPI.

Susanti, Devi W. dan Rohmah, Faridah A. (2011). *Efektivitas Musik Klasik dalam Menurunkan Kecemasan Matematika (Math Anxiety) pada peserta didik kelas XI*. Jurnal Humanitas, Vol. VIII No.2.