PELAKSANAAN PENDEKATAN *RIGOROUS MATHEMATICAL THINKING* UNTUK MENINGKATKAN KEMAMPUAN PEMAHAMAN KONSEPTUAL, PEMECAHAN MASALAH MATEMATIS SERTA PENGARUHNYA PADA *SELF-REGULATED LEARNING* SISWA DI SMA

**Fiki Purnawan**

**ABSTRAK**

 Pelaksanaan pendekatan *rigorous mathematical thinking* untuk meningkatkan kemampuan pemahaman konseptual, pemecahan masalah matematis serta pengaruhnya pada *self-regulated learning* siswa di SMA. Tujuan penelitian ini adalah untuk mengembangkan komponen-komponen pembelajaran agar dapat meningkatkan kemampuan pemahaman konseptual dan pemecahan masalah matematis serta pengaruhnya pada *self-regulated learning*  siswa SMA. Metode yang digunakan dalam penelitian ini yaitu *Mixed Method* (Metode Campuran) tipe *The Embedded Design* dengan populasi seluruh siswa kelas XI SMAN 18 Bandung. Hasil penelitian menunjukan bahwa kemampuan pemahaman konseptual, pemecahan masalah matematis dan *self-regulated learning* siswa yang mendapat pembelajaran *rigorous mathematical thinking* lebih baik dari pada siswa yang mendapat pembelajaran konvesional di tinjau dari kemampuan awal matematis. Terdapat pengaruh kemampuan pemahaman konseptual terhadap *self-regulated learning* pada pembelajaran *rigorous mathematical thinking*, terdapat pengaruh kemampuan pemecahan masalah matematis terhadap *self-regulated learning* pada pembelajaran *rigorous mathematical thinking*, terdapat pengaruh kemampuan pemahaman konseptual terhadap pemecahan masalah matematis pada pembelajaran *rigorous mathematical thinking*. Serta terdapat korelasi antara pemahaman konseptual, pemecahan masalah matematis dan *self-regulated learning* pada pembelajaran *rigorous mathematical thinking*.

Kata Kunci: *self-regulated learning, rigorous mathematical thinking,* pemahaman konseptual, pemecahan masalah matematis

**ABSTRAK**

The implementation of rigorous mathematical thinking approach to improve the ability of conceptual understanding, mathematical problem solving and its effect on self-regulated learning in senior high school students. The purpose of this research is to develop learning components in order to improve the ability of conceptual understanding and mathematical problem solving and its effect on self-regulated learning of senior high school students. The research method applied by the writer was Mixed Method research and type is The Embedded Design. The population of this research were all students at class XI SMAN 18 Bandung. The results showed that the ability of the conceptual understanding, mathematical problem solving and self-regulated learning of students who gain experience through rigorous mathematical thinking better than students who received conventional learning in the review of early mathematical ability. There is the influence of the ability of a conceptual understanding of the self-regulated learning on learning rigorous mathematical thinking, there is the influence of mathematical problem solving ability to self-regulated learning on learning rigorous mathematical thinking, there is the influence the ability of the conceptual understanding of the mathematical problem solving in learning rigorous mathematical thinking. And there is a correlation between conceptual understanding, mathematical problem solving and self-regulated learning on rigorous mathematical thinking.

Keywords: *self-regulated learning, rigorous mathematical thinkin, conceptual understanding, mathematical problem solving*