

ABSTRAK

Fadilah Shaomi. (1104579). Penerapan Pendekatan *Brain Based Learning* untuk Meningkatkan Kemampuan Koneksi Matematis Siswa SMP.

Penelitian ini dilatarbelakangi oleh pentingnya kemampuan koneksi matematis siswa SMP dan fakta rendahnya kemampuan koneksi matematis siswa SMP. Adapun tujuan penelitian ini adalah: (1) mengetahui peningkatan kemampuan koneksi matematis siswa SMP yang memperoleh pembelajaran matematika dengan pendekatan *Brain Based Learning* dan pembelajaran matematika dengan pendekatan matematika biasa; (2) Mengetahui sikap siswa terhadap pembelajaran matematika dengan pendekatan *Brain Based Learning*. Metode yang digunakan dalam penelitian ini adalah kuasi eksperimen dengan desain penelitiannya adalah *non-equivalen control group design*. Populasi dalam penelitian ini adalah seluruh siswa kelas VII di SMP Taruna Terpadu (*Bogor Centre School*). Pada penelitian ini diambil dua kelas secara acak sebagai sampel. Kelas VII O sebagai kelas eksperimen dengan pendekatan *brain-based learning* dan kelas VIII I sebagai kelas kontrol dengan pendekatan matematika biasa. Adapun data penelitian ini diperoleh melalui tes kemampuan koneksi matematis, angket, lembar observasi, dan jurnal. Hasil penelitian menunjukkan bahwa peningkatan kemampuan koneksi matematis siswa yang memperoleh pembelajaran dengan pendekatan *brain based learning* lebih tinggi daripada siswa yang memperoleh pembelajaran dengan pendekatan matematika biasa. Selain itu, siswa memiliki sikap yang positif terhadap pembelajaran matematika dengan pendekatan *brain-based learning*.

Kata kunci : Pendekatan *brain-based learning*, Kemampuan koneksi matematis.

ABSTRACT

Fadilah Shaomi. (1104579). The application of *Brain-Based Learning* Approach to Increasing the Mathematical Connections Abilities for Junior High School Students .

This research is based on how important the mathematical connections abilities for Junior High School Students and the fact about how low mathematical connections abilities of Junior High School Students. This research aims to: (1) knowing the increasing of mathematical connections abilities of Junior High School Students who obtain learning mathematics using brain-based learning approach and using common mathematics approach ; (2) knowing student's attitude toward learning mathematics using brain-based learning approach. The method of this result used quasi experiment which was using learning design of non-equivalent control group design. The populations of this research were all of 7th grade students of Taruna Terpadu (Bogor Centre School) Junior High School. From this research, researcher randomly took two classes as sample. Class VII O was as experiment class who studied using brain-based learning approach and class VII I was as control class who studied using common mathematics approach. In addition, the data of this research was obtained through mathematical connection ability test, questioner, observation sheet, and journals. The result of this research showed that the students who studied using brain based learning approach have a higher mathematic connection ability than the students who studied using common mathematics approach. Besides that, almost all students have positive attitude toward mathematics learning using *brain based learning* approach.

Keywords: Brain-based learning approach, Mathematical connection ability.