

**PENINGKATAN KEMAMPUAN REPRESENTASI DAN KOMUNIKASI
MATEMATIS SISWA SEKOLAH DASAR MELALUI *PROJECT BASED
LEARNING* DENGAN TEKNIK *MIND MAP***

(Penelitian Kuasi Eksperimen di Kelas IV Kecamatan Sukasari Kota Bandung)

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ABSTRAK

Penelitian ini dilatarbelakangi oleh hasil studi pendahuluan yang menunjukkan bahwa kemampuan representasi dan komunikasi matematis siswa sekolah dasar masih rendah. Siswa masih mengalami kesulitan dalam merepresentasikan konsep matematis dan mengkomunikasikan ide matematis. Penelitian ini bertujuan untuk mendeskripsikan apakah terdapat perbedaan perolehan kemampuan representasi dan komunikasi matematis siswa yang memperoleh pembelajaran *project based learning* dengan teknik *mind map* dengan siswa yang memperoleh *project based learning* tanpa teknik *mind map*. Tujuan penelitian ini juga untuk mendeskripsikan apakah peningkatan kemampuan representasi dan komunikasi matematis siswa yang memperoleh *project based learning* dengan teknik *mind map* lebih baik dibandingkan dengan peningkatan kemampuan representasi dan komunikasi matematis siswa yang memperoleh *project based learning* tanpa teknik *mind map*. Penelitian ini merupakan penelitian kuasi eksperimen dengan desain *non-equivalent group design*. Subjek penelitian terdiri dari 63 siswa kelas IV salah satu Sekolah Dasar di Kota Bandung. Pengumpulan data dilakukan menggunakan instrumen tes kemampuan representasi dan komunikasi matematis. Adapun analisis data menggunakan statistik parametrik dan non parametrik. Hasil penelitian menunjukkan bahwa terdapat perbedaan perolehan kemampuan representasi dan komunikasi matematis siswa yang memperoleh pembelajaran *project based learning* dengan teknik *mind map* dengan siswa yang memperoleh *project based learning* tanpa teknik *mind map*. Hasil penelitian juga menunjukkan peningkatan kemampuan representasi dan komunikasi matematis siswa yang memperoleh *project based learning* dengan teknik *mind map* lebih baik dibandingkan dengan peningkatan kemampuan representasi dan komunikasi matematis siswa yang memperoleh *project based learning* tanpa teknik *mind map*.

Kata kunci : kemampuan representasi matematis, kemampuan komunikasi matematis, *project based learning*, teknik *mind map*, siswa sekolah dasar.

**IMPROVING MATHEMATICAL REPRESENTATION AND
COMMUNICATION ABILITY OF ELEMENTARY SCHOOL STUDENT
THROUGH PROJECT BASED LEARNING USING MIND MAP TECHNIQUE**

(Quasi Experimental Research in Grade 4th in Sukasari District Bandung City)

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ABSTRACT

This research is backgrounded by the result of preliminary study showed that mathematical representation and communication ability of elementary school students are still low. Students find difficulties in representing mathematical concept and communicating mathematical ideas. This research aims to describe whether there are differences in mathematical representation and communication ability between students who learn through project based learning using mind map technique and students who learn through project based learning without mind map technique. The aim of this research also to describe whether the improvement of mathematical representation and communication ability of students who learn through project based learning using mind map technique is better than the improvement of mathematical representation and communication ability of students who learn through project based learning without mind map technique. This research was quasi experimental research using non-equivalent group design. The subject consisted of 63 students of 4th grade one of elementary school in Bandung city. The data were collected by instruments using mathematical representation and communication test. The data analysis used parametric and non parametric statistic. The result showed that there are differences in the mathematical representation and communication ability between students who learn through project based learning using mind map technique and students who learn through project based learning without using mind map technique. The result also showed the improvement of mathematical representation and communication ability of students who learn through project based learning using mind map technique is better than the improvement of mathematical representation and communication ability of students who learn through project based learning without using mind map technique.

Keywords : mathematical representation ability, mathematical communication ability, project based learning, mind map technique, elementary school student.

Laely Farokhah, 2018

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