

**ANALISIS *LEARNING TRAJECTORY* MATEMATIS
DALAM KONSEP PERKALIAN BILANGAN CACAH
DI KELAS RENDAH SEKOLAH DASAR**

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Abstrak

Strategi atau cara siswa kelas rendah sekolah dasar dalam melakukan perkalian cukup variatif. Hal ini mendorong peneliti untuk mengkaji lebih jauh tentang *Learning Trajectory* perkalian siswa kelas rendah sekolah dasar melalui penelitian. Fokus penelitian ini adalah berusaha mengungkap: (1) Pola *empirical learning trajectory* perkalian; (2) *Hypothetical learning trajectory* perkalian. Penelitian ini menggunakan pendekatan kualitatif dengan metode studi kasus dimana subjeknya adalah siswa kelas rendah sekolah dasar. Berdasarkan hasil penelitian disimpulkan (1) Secara umum terdapat lima pola *empirical learning trajectory* perkalian bilangan cacah di kelas rendah sekolah dasar yaitu: pemodelan dengan benda konkret, pemodelan dengan gambar, penjumlahan, *raraban*, dan pola buku teks BSE. (2) *Hypothetical learning trajectory* perkalian dapat disusun berdasarkan pola *empirical learning trajectory* sehingga dapat digunakan guru sebagai petunjuk dalam membagi tahapan pembelajaran dan dapat memberikan berbagai alternatif strategi ataupun *scaffolding* untuk membantu dan mengatasi siswa yang mengalami kesulitan dalam memahami konsep perkalian bilangan cacah di kelas rendah sekolah dasar.

Kata Kunci: *Learning Trajectory*, Perkalian Bilangan Cacah, Siswa Kelas Rendah Sekolah Dasar.

**THE ANALYSIS OF MATHEMATICAL LEARNING TRAJECTORY
IN THE CONCEPT OF WHOLE NUMBER MULTIPLICATION
AT THE LOW-GRADE OF ELEMENTARY SCHOOL**

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Abstract

The strategies or ways of students at the low-grade of elementary school in doing multiplication are various enough. These various ways motivate the researcher to investigate the learning trajectory of whole number multiplication at the low-grade students at elementary school through the research. The focus of this research is trying to reveal : (1) the pattern of empirical learning trajectory of multiplication; (2) hypothetical learning trajectory of multiplication the research uses the qualitative approach with case study method and the low-grade students of elementary school as the subject. Base on the research result, the researcher conclude: 1) In general, there are five patterns of empirical learning trajectory whole numbers multiplication at the low-grade of elementary school. They are modeling with concrete thing, modeling with pictures, modeling addition, “*raraban*” and BSE textual book pattern. 2) Hypothetical learning trajectory of multiplication can be arranged based on the empirical learning trajectory pattern which can be used by the teacher as their ways to divide the learning phases. It also give the various strategies alternatively or scaffolding to help the students or solve their problems (difficulties) in comprehending the concept of whole number multiplication at the lower grade of elementary school.

Key words: *Learning Trajectory, the whole number multiplication, and the lower grade students of the elementary school.*