

**PEROLEHAN DAN PENINGKATAN KEMAMPUAN KOMUNIKASI MATEMATIS
SISWA DALAM PEMBELAJARAN *PROBLEM POSING*
DAN *DIRECT INSTRUCTION* DITINJAU DARI *SELF EFFICACY* SISWA**

DISERTASI

**Diajukan untuk memenuhi Sebagian dari Syarat
untuk Memperoleh Gelar Doktor Pendidikan
Program Studi Pendidikan Dasar
Bidang Studi Matematika**



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**PROGRAM STUDI PENDIDIKAN DASAR
SEKOLAH PASCASARJANA
UNIVERSITAS PENDIDIKAN INDOESIA
2023**

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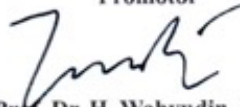
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PERNYATAAN

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ABSTRAK

Sri Winggowati (2023). Perolehan dan Peningkatan Kemampuan Komunikasi Matematis Siswa dalam Pembelajaran *Problem Posing* dan *Direct Instruction* Ditinjau dari *Self Efficacy* Siswa.

Penelitian ini bertujuan untuk menganalisis dan mendeskripsikan tentang pengaruh pembelajaran *problem posing* (PP) dan *direct instruction* (DI) terhadap perolehan dan peningkatan kemampuan komunikasi matematis (KKM) siswa ditinjau dari tingkat *self-efficacy* (SE) matematis siswa, serta diperolehnya konjektur yang mengaitkan tingkat SE siswa dengan KKM dalam menyelesaikan soal-soal perbandingan. Metode di dalam penelitian ini adalah *mixed method* jenis *explanatory sequential design*, dengan tahapan kuantitatif dan kualitatif. Dalam tahapan kuantitatif digunakan penelitian deskriptif dan kuasi eksperimen dengan desain faktorial 3x2. Dalam tahap kualitatif digunakan rancangan *case study* dengan perspektif *grounded theory* prosedur sistematis. Sampel dalam penelitian ini adalah siswa kelas 5 Sekolah Dasar Negeri di Kota Bandung berjumlah 84 siswa. Dari penelitian ini diperoleh kesimpulan : i) Pembelajaran dengan model PP dan DI masing-masing berpengaruh secara signifikan terhadap perolehan KKM siswa. ii) Tidak terdapat efek interaksi antara pembelajaran dan tingkat SE terhadap perolehan dan peningkatan KKM siswa. iii) Pengaruh Implementasi pembelajaran PP berpengaruh lebih tinggi daripada pembelajaran model DI terhadap perolehan KKM. iv) Tidak terdapat efek interaksi antara pembelajaran dan tingkat SE terhadap peningkatan KKM siswa. v) SE siswa berpengaruh positif terhadap KKM siswa. vi) KKM siswa yang memiliki level SE tinggi dapat mengkomunikasikan simbol dan visual (visualisasi, representasi), mengkomunikasikan konsep (ide matematis, bahasa, konsep dan contoh), membangun argumen (argument dan bukti), diskusi dan kolaborasi matematis (diskusi, menyimak argumen, kolaboratif).

Kata Kunci: Kemampuan komunikasi matematis, *self-efficacy*, *problem posing*, *direct instruction*, korelasi dan regresi.

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Abstract

Sri Winggowati (2023). *Acquisition and Improvement of Students' Mathematical Communication Ability in Learning Problem Posing and Direct Instruction in terms of Student Self-Efficacy*

This study aims to analyze and describe the effect of problem-posing (PP) and direct instruction (DI) learning on the acquisition and improvement of students' mathematical communication skills (KKM) in terms of the level of students' mathematical self-efficacy (SE), as well as obtain a conjecture that relates the level of SE students with KKM in solving comparison questions. The method used in this research is a mixed method of explanatory sequential design with quantitative and qualitative stages. In the quantitative stage, descriptive and quasi-experimental research was used with a 3x2 factorial design. In the qualitative stage, a case study design is used with a grounded theory perspective and systematic procedures. The sample in this study was 5th-grade students of public elementary schools in the city of Bandung, totaling 84 students. From this study, the following conclusions were obtained: i) Learning with the PP and DI models each had a significant effect on students' KKM acquisition. ii) There is no interaction effect between learning and SE level on the acquisition and improvement of students' KKM. iii) The implementation of PP learning has a higher effect than DI model learning on KKM acquisition. iv) There is no interaction effect between learning and the level of SE on the improvement of students' KKM. v) Student SE has a positive effect on students' KKM. vi) KKM students who have a high SE level can communicate symbols and visuals (visualization, representation), communicate concepts (mathematical ideas, language, concepts, and examples), build arguments (arguments and evidences), and discuss and collaborate mathematically (discussions, listening to arguments, collaborative).

Keywords: Mathematical communication skills, self-efficacy, problem-posing, direct instruction, correlation, and regression.

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