

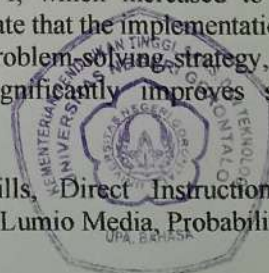
## ABSTRACT

**HANIFA, Student ID Number 411421059.** Improving Students' Mathematical Problem-Solving Skills through the Implementation of the Direct Instruction Model Integrated with Polya's Problem-Solving Strategy Assisted by Lumio Media on Word Problems in the Probability Topic in Grade VIII of SMP Muhammadiyah Kwandang. Undergraduate Thesis. Department of Mathematics, Faculty of Mathematics and Natural Sciences, Universitas Negeri Gorontalo, 2025.

The Supervisors: (1) **Prof. Dr. Evi P. Hulukati, M.Pd.**, (2) **Dewi Rahmawaty Isa, S.Si., M.Pd.**

This research aims to obtain information regarding the improvement of students' mathematical problem-solving skills in the topic of probability in Grade VIII, and students' learning activities following the application of the direct instruction model integrated with Polya's problem-solving strategy, assisted by Lumio media. It also aims to examine teacher activities in managing learning using the direct instruction model integrated with Polya's problem-solving strategy, assisted by Lumio media. The procedure applied is classroom action research, which includes planning, implementation, observation, and reflection in each cycle. The study was conducted in Grade VIII of SMP Muhammadiyah Kwandang on the probability topic over two cycles. The results indicate that students' mathematical problem-solving skills, learning activities, and teacher performance in Grade VIII improved due to the implementation of the direct instruction model integrated with Polya's problem-solving strategy, assisted by Lumio media. The improvements include: (1) Observation results of teacher activity in managing the classroom using the direct instruction model integrated with Polya's problem-solving strategy showed an increase from 74.14% (Good category) in Cycle I to 89.22% (Very Good category) in Cycle II; (2) Observation results of student activity using the same model showed an increase from 70.43% (Active category) in Cycle I to 86.64% (Very Active category) in Cycle II; (3) Student learning outcomes in mathematics showed that only 33.33% of students achieved mastery in Cycle I, which increased to 91.66% achieving mastery in Cycle II. These findings indicate that the implementation of the direct instruction model integrated with Polya's problem-solving strategy, assisted by Lumio media, in the probability topic significantly improves students' mathematical problem-solving skills.

**Keywords:** Mathematical Problem-Solving Skills, Direct Instruction Model Integrated with Polya's Problem-Solving Strategy, Lumio Media, Probability



## LEMBAR PENGESAHAN SKRIPSI

Skripsi yang berjudul: “**Meningkatkan Kemampuan Pemecahan Masalah Matematika Siswa Melalui Penerapan Strategi Polya Berbantuan Media Lumio Pada Soal Cerita Materi Peluang Di Kelas VIII SMP Muhammadiyah Kwandang**”.

Oleh

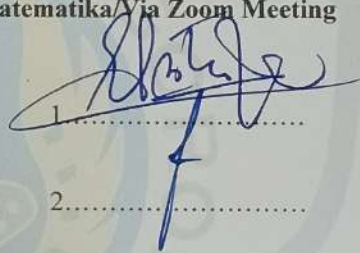

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**Hari/Tanggal** : Rabu/ 11 Juni 2025  
**Waktu** : 10.00 – 11.30 WITA  
**Tempat** : Ruang Sidang Matematika/Via Zoom Meeting

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