

LEMBAR PENGESAHAN SKRIPSI

Skripsi yang berjudul “Pengembangan Modul Ajar Berbasis *Problem Based Learning* untuk Memfasilitasi Kemampuan Komunikasi Matematis Siswa pada Materi Sistem Persamaan Linear Tiga Variabel (SPLTV) di Kelas X”.

Oleh

YULIA AGUSTINA HASAN

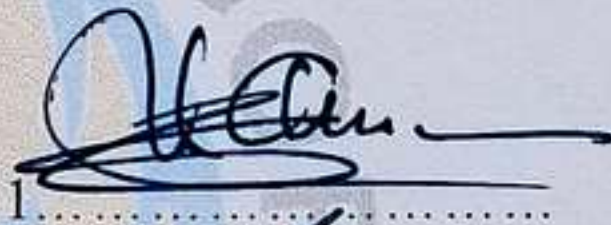
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Program Studi Pendidikan Matematika
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Telah dipertahankan di depan pembimbing dan dewan penguji

Hari/Tanggal : Kamis, 30 Oktober 2025
Waktu : 09.00 – 10.30 WITA
Tempat : Ruang Sidang Matematika 2/Via Zoom Meeting

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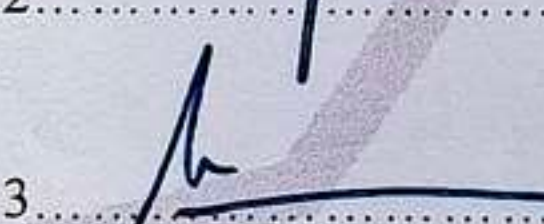
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ABSTRACT

Yulia Agustina Hasan, 411421084. Development of Problem-Based Learning (PBL) Teaching Modules to Facilitate Students' Mathematical Communication Skills on Three-Variable Linear Equation System (SPLTV) Materials in Class X. Undergraduate Thesis. Study Program of Mathematics Education, Department of Mathematics, Faculty of Mathematics and Natural Sciences, Universitas Negeri Gorontalo. 2025.

The Supervisors: (1) **Drs. Sumarno Ismail, M.Pd.**, (2) **Bertu Rianto Takaendengan, M.Pd.**

Mathematical communication skills refer to the capacity to articulate mathematical ideas both orally and in writing through processes that link mathematical models with real-world phenomena, explaining reasoning or solution procedures systematically, engaging in discourse to exchange mathematical arguments, and constructing logical justifications related to problem contexts. This study aimed to develop a Problem-Based Learning (PBL) module designed to foster students' mathematical communication skills on the topic of the Three-Variable Linear Equation System (SPLTV) for Class X students, and to evaluate its validity and practicality for instructional use. This research employed a Research and Development (R&D) design utilizing the ADDIE model, involving 20 Class X students from SMA Negeri 1 Bone during the even semester of the 2024/2025 academic year. The data were obtained through validation sheets assessed by material and learning experts, design expert evaluations, and teacher and student response questionnaires. The validation results demonstrated that the developed module achieved a validity score of 89.23% (very valid) from material and learning experts, and 85.45% from design experts. The practicality assessment also indicated a very practical category, with response percentages of 90% from teachers and 84.53% from students. Hence, the PBL-based mathematics learning module is declared valid and practical for classroom implementation. Additionally, this module can serve as a reference for future research in increasing awareness in improving students' mathematics learning outcomes.

Keywords: Teaching modules, Problem-Based Learning, Mathematical Communication, SPLTV

