

ABSTRAK

AKHYAR PUADI. Pengembangan Media Pembelajaran LKPD Berbasis *Problem Based Learning* Berbantuan Geogebra Untuk Meningkatkan Kemampuan Penalaran Matematis Dan Kemandirian Belajar Siswa. Tesis. Medan: Program Pascasarjana Universitas Negeri Medan, Oktober 2024.

Tujuan penelitian ini adalah untuk mengetahui kevalidan, kepraktisan, dan keefektifan media pembelajaran LKPD berbasis problem based learning berbantuan geogebra dalam meningkatkan kemampuan penalaran matematis dan kemandirian belajar siswa. Metode penelitian ini adalah penelitian dan pengembangan. Model pengembangan penelitian ini adalah model ADDIE. Subjek penelitian ini adalah siswa kelas XI SMK Swasta Rokita Sari Bangun Purba. Hasil penelitian ini menunjukkan bahwa media pembelajaran LKPD berbasis problem based learning berbantuan geogebra mendapat rata-rata skor kevalidan media sebesar 4,75 pada kategori valid. Kepraktisan media LKPD berbasis problem based learning berbantuan geogebra dinilai dari rata-rata skor keterlaksanaan pembelajaran diperoleh sebesar 87,22% dengan kategori baik, dan respon positif siswa memperoleh rata-rata skor sebesar 88,94% dengan kategori sangat positif sehingga media yang dikembangkan dapat dikatakan praktis. Sedangkan keefektifan media LKPD berbasis problem based learning berbantuan geogebra dinilai dari rata-rata skor ketuntasan secara klasikal siswa sebesar 93,75% dengan kategori sangat tinggi, ketercapaian tujuan pembelajaran diperoleh rata-rata skor sebesar 89,06%, dan respon siswa diperoleh rata-rata skor sebesar 88,94% sehingga media yang dikembangkan dapat dikatakan efektif. Skor peningkatan kemampuan penalaran matematis siswa mendapat nilai N-gain sebesar 0,48 pada kategori sedang, dan skor peningkatan kemandirian belajar siswa mendapat nilai N-gain sebesar 0,55 pada kategori sedang, sehingga dapat dikatakan media yang dikembangkan dapat meningkatkan kemampuan penalaran matematis dan kemandirian belajar siswa.

Kata Kunci: LKPD, Problem Based Learning, Geogebra, Kemampuan Penalaran Matematis, Kemandirian Belajar Siswa.

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ABSTRACT

AKHYAR PUADI. Development of Problem-Based Learning-Based LKPD Learning Media Assisted by Geogebra to Improve Mathematical Reasoning Skills and Student Learning Independence. Thesis. Medan: Postgraduate Program of Medan State University, October 2024.

The purpose of this study is to determine the validity, practicality, and effectiveness of LKPD learning media based on geogebra-assisted problem based learning in improving students' mathematical reasoning skills and learning independence. This research method is research and development. The development model of this research is the ADDIE model. The subject of this study is a grade XI student of Rokita Sari Bangun Purba Private Vocational School. The results of this study show that the LKPD learning media based on problem-based learning assisted by geogebra received an average media validity score of 4.75 in the valid category. The practicality of the LKPD media based on problem-based learning assisted by geogebra was assessed from the average score of learning feasibility obtained at 87.22% with the good category, and the positive response of students obtained an average score of 88.94% with a very positive category so that the media developed can be said to be practical. Meanwhile, the effectiveness of the LKPD media based on problem-based learning assisted by geogebra was assessed from the average classical completeness score of students of 93.75% with a very high category, the achievement of learning objectives obtained an average score of 89.06%, and the student response obtained an average score of 88.94% so that the media developed could be said to be effective. The score of improving students' mathematical reasoning ability got an N-gain value of 0.48 in the medium category, and the score of increasing students' learning independence got an N-gain value of 0.55 in the medium category, so it can be said that the developed media can improve students' mathematical reasoning ability and learning independence.

Keyword: LKPD, Problem Based Learning, Geogebra, Mathematical Reasoning Ability, Student Learning Independence.

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